Oil, Paint and Drug Reporter

VOL. LVIII. No. 20. NEW YORK, MONDAY, NOVEMBER 12, 1900. FOR RATES SEE PAGE 5.

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NEW YORK, NOVEMBER 12, 1900.

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THE DECLINE IN QUININE.

In our market report of a week ago we noted a decline in the quotations for quinine. The decline was from thirty-seven cents to thirty-five cents an ounce for bulk, and was due to a lower range of values at the Amsterdam cinchona bark auction on the 1st inst. As was pointed out editorially in our last issue, the decline in bark values was due to the unexpectedly large shipments from Java during October, which followed previous heavy shipments in September. The German brands were the first to be reduced. Agents in this country received cable instructions to reduce quotations almost simultaneously with the receipt of advices announcing the heavy shipments and the decline in bark values at the Amsterdam auction. One American brand immediately followed, but the others were not reduced until Saturday, the 3d inst. London cables reported a decline in that market, owing to the decline in bark values. The decline in the speculative market amounted to one and one-eighth pence, which was somewhat less than was the total decline in this country. Previous to the reduction by manufacturers, outside holders in this market quoted thirty-five and one-half cents for bulk and after the sale they reduced their inside figures to thirty-four cents. The market for Java quinine also became easier. At an auction in Batavia on October 31 a decline of about five per cent. occurred. Holders in this market reduced their views from thirty-four to thirty-three and one-half cents an ounce for bulk.

During the latter part of March quinine was quoted in this market at thirty-one cents, but the market soon began to improve, and in August thirty-seven cents was reached. At that time many were of the opinion that forty-cent quinine was not only a possibility, but, at the same time, a strong probability. They based that opinion on the fact that the bark shipments from January 1 to September 1 had been far below the total shipments during the same period in 1899, and to the fact that auction prices at Amsterdam had steadily advanced. Even September's large shipments had no material effect on those opinions, as it was thought that shipments would not continue large. The comparatively small shipments during the first half of October had a tendency to strengthen those views. It must not be denied, however, that toward the close of the month an easier feeling developed, and the trade rather anxiously awaited figures showing the shipments for the second half. It was freely admitted that should the shipments be large auction prices would decline, which would probably bring about a reduction in manufacturers' quotations for quinine. It is now sufficiently plain that the supposition just noted was correct, but at the same time it is positively stated that higher quotations for quinine than those ruling to-day are fully warranted, considering the present cost of bark. It is pointed out that when quinine was last selling at forty cents an ounce, which was in April, 1899, bark sold in Amsterdam at auction at the unit price of ten and nine-tenths Dutch cents per half kilogram, which was exactly the same as the figure established at Amsterdam on the 1st inst.

It is a fact worthy of note that all the time quinine was advancing large consumers and distributors showed but little interest in the situation, and it was but seldom that they bought in excess of their immediate requirements. Demand, considering the season, was fully up to the average, but, as a rule, when indications point very strongly to higher prices, large consumers and distributors purchase in a large way in anticipation of an advance.

Since last week's decline the market has ruled very quiet. Early in the week the London speculative market declined one-quarter penny, but toward the close of the week that market became firmer at the decline.

THE COCOA BUTTER AUCTIONS.

At the cocoa butter auction at Amsterdam on Tuesday last the average price paid was ninety and three-eighths Dutch cents per half kilogram, as compared with ninety-nine and one-quarter Dutch cents at the previous sale. The highest price paid was ninety-four and one-half Dutch cents at the beginning of the sale and the lowest price was but one Dutch cent under the average. After the opening, therefore, prices fluctuated within a range of two Dutch cents or about three-quarters of an American cent. At the London auction, held on the same day, the average price paid was eighteen and three-sixteenths pence per pound as compared with twenty and three-eighths pence at the previous London auction. In the following table we give figures showing the average prices realized at the auction sales in both London and Amsterdam since July, 1899:—

	Amsterdam. Dutch cts. Per ½ kilo.	London. Pence. Per pound.
1899.		
July	80	16 9-16
August	86	19 8-16
September	93	16 9-16
October	88	17 3-16
November	91	17 10-16
December	94	18 10-16
1900.		
January	93	17 8-16
February	105	16 10-16
March	92	17 14-16
April	85 3-10	16 2-16
May	87¼	17 14-16
June	81	15 2-16
July	89	16 9-16
August	98¼	19 4-16
September	101¼	No sale
October	99¼	20 6-16
November	90⅜	18 3 16

The quantity of butter offered at Amsterdam amounted to 125 tons of all brands, and at London to eighty tons. Since March the quantities offered at auction have been as follows:—

	Amsterdam. Tons.	London. Tons.
1900.		
November	125	80
October	106	55
September	101	..
August	64	20
July	93½	40
June	103½	130
May	78½	30
April	95	100
March	89	100

The decline in the auction prices was expected by many, owing to the large offerings, and quotations in this market were slightly reduced prior to the auctions in anticipation of a decline. On the other hand, there were a few who looked for higher prices or who expected that previous prices would at least be maintained. They based this belief on the fact that the cost of the cocoa bean is relatively higher than the selling price of cocoa butter. This fact may tend to advance prices for the butter in the future, but for the next one or two auctions, at least, prices will probably depend on the quantity offered and the extent of demand. Since the auctions this market has become easier, prices are irregular and range from forty-one to forty-two cents for bulk goods, as to seller and brand. Demand is slow, and there has not been sufficient business to establish a correct quotation.

A STRONG GAMBIER MARKET.

In view of the light offerings of gambier in the primary market, the question as to whether the supply is actually short or whether for matters of policy it is being withheld, has become interesting, and has brought out a host of contrary opinions. That those who espoused certain deductions were honest in their convictions is clear by the heavy losses many of them have had to cover. The bear side of the gambier market, both in New York and London, has been a steady loser in the face of conditions which at one time seemed rather more than reasonably favorable to them.

In our issue of August 20 we referred editorially to the subject and expressed the opinion that within thirty days from that date the Eastern shippers would be obliged to show their hands. In other words, that we would have a very good line upon their policy. Nearly three months, however, have now elapsed, and leave us still in doubt. Importers probably have stronger views, but so many have confidently guessed before and guessed wrong, that opinion is much more conservative even based as it is upon facts which point to a much more definite conclusion. Those whose interests favor higher prices point to the stronger statistical position backed by claims of short supply at Singapore and light stocks in hands of American and Continental consumers. The bears, on the other hand, place their reliance on a supposition that the Chinese are only holding back for more favorable opportunities.

There may be some truth in the latter contention, but it hardly seems probable. Prices have now reached a point a full cent above the ruling figures of last year and consumers, having grown accustomed to the exceptionally low values of the past two years, are naturally averse to coming into a very much higher market. They cannot rid themselves of the thought that if gambier could be produced and sold in the fall of 1898 for two dollars and sixty cents per hundred pounds, there should be no very valid reason why they are called upon to pay over four dollars at the same period of the present year. So long, therefore, as their supplies are adequate for current needs, demand must be more or less restricted.

Singapore holders, in their turn, show a pronounced indifference. There is nowhere to be found any anxiety to sell, and all bids cabled shading market quotations are promptly declined. It is the general impression that if there was any material supply of gambier held back, the present good prices would bring it out. The natural deduction is, therefore, that there is not much gambier to be had, and that the holders, sure of their position, are waiting for more urgent needs on the part of consuming industries. The statistical position seems to bear out the contention. There are but two sailing vessels afloat for this country, the Leghetto, with eight thousand bales for New York, and the Freeman, with but three thousand, for Boston. Arrivals at this port during November will not exceed ten thousand bales. The quantity afloat, therefore, is but twenty-one thousand bales, which, added to a store stock of twenty thousand in New York and Boston, make the visible supply but forty-one thousand bales, as against seventy thousand at the same time last year. The shipments from Singapore to Atlantic ports, too, since Jan. 1, have been lighter by six thousand bales in 1900 than in 1899 for the same period, while the total number of tons shipped, from Jan. 1 to Nov. 1, to America, England and the Continent, have been 29,000 during 1900, as against 34,000 during 1899, and this in the face of more enticing prices.

In the early part of the year shipments were particularly heavy, and the price began to fall. Suddenly the unloading ceased; it was thought due to a desire on the part of holders to bring the market back again to its higher level. The values certainly did rise again, but that shippers are not taking advantage of it now lends color to the supposition that their plans were not so deep laid after all, and that they unloaded too heavily to have left anything like a large reserve. All things considered the position of the market is unusually strong and any undue anxiety on the part of consumers would be almost certain, from present indications, to lead to still further advances.

GLYCERINE STATISTICS.

On Oct. 1, last, in discussing the position of glycerine, we had occasion to use certain figures to show the quantity imported into the United States. The following were the figures used, and they show the quantity of crude and refined glycerine imported during the past thirteen fiscal years, ending June 30:—

	Glycerine, Crude. Lbs.	Dollars.	Glycerine, Refined. Lbs.	Dollars.
1888	9,502,014	954,807	1,193,728	152,885
1889	9,826,820	824,817	736,420	86,108
1890	11,811,308	972,001	210,545	26,186
1891	11,983,796	874,161	446,042	43,941
1892	13,954,008	747,218	661,339	58,953
1893	14,325,111	768,565	284,785	24,394
1894	9,157,205	554,374	111,401	11,193
1895	16,199,483	904,907	249,226	24,583
1896	20,801,917	1,431,578	371,802	36,925
1897	11,936,478	1,084,042	655,065	84,292
1898	12,108,966	760,463	201,129	17,887
1899	14,496,054	965,386	671,322	59,546
*1900	27,943,106	2,155,514	.....	.....

*Includes crude and refined.

It will be noticed that the imports of both crude and refined during the fiscal year ending June 30, 1900, were larger than any other similar period, and an increase of nearly eighty per cent. over the fiscal year, 1899. Several of our readers have called our attention to that fact, and have been under the impression that there was some mistake in the figures as printed. This has led us to make a thorough investigation, which has established the correctness of our former report. Below we give figures which show the quantity imported during each month of the last fiscal year. The figures include both crude and refined:—

	Pounds.	Dollars.
July, 1899	1,028,302	88,929
August	1,597,875	111,353
September	2,050,838	137,439
October	3,702,411	271,537
November	2,601,210	205,058
December	3,220,239	205,264
January, 1900	3,226,233	253,628
February	1,361,860	114,986
March	2,127,889	172,060
April	2,879,890	243,989
May	1,697,957	139,735
June	2,439,402	183,533
Total	27,943,106	2,155,514

THE PETROLEUM FIELDS IN OCTOBER.

It was generally expected that the new production, as the result of drilling operations during the month of October, would show an increase, as quite a number of exceptionally good wells were brought in, but these have not aggregated the amount added to the new production of the preceding month in consequence of the extraordinary output of the Copley gusher. The falling off in new production is quite large, being over 5,800 barrels. This is in part accounted for by a decrease in the number of wells completed, and an increase in the percentage of dry holes. While the exhibit made by the field report may be regarded as bullish, the change is not of so radical a character as to warrant the expectation of important influence on the price of the product, as the total production does not show a corresponding decrease. The decrease in the number of wells completed is in part due to the scarcity of water in some sections, and in part to the lower prices for the product, operators claiming

that it does not pay to drill wells in territory where only small producers may be expected. The amount of new work under way at the close of the month also shows a considerable decrease, which is attributable to the restriction of operations to the more promising sections. The decrease in new work is entirely in the Ohio and Indiana fields, in the Pennsylvania and West Virginia fields development work having been stimulated by recent good results. No important increase in field operations during the present month is expected, as conditions favorable to active prosecution of development work are wanting, while weather and other influences are not likely to improve.

The total number of wells completed during the month of October was 1,377, showing a decrease of sixty-seven. The total daily production of these wells at the close of the month was 20,969 barrels, being a decrease of 5,825 barrels, the principal part of the decrease being in the Pennsylvania fields, while Indiana showed a slight increase. The average daily production of the October wells was sixteen barrels, while that of the September wells was nearly nineteen and one-half barrels. The percentage of dry holes in October was nearly nineteen, while that in September was a little more than seventeen and five-eighths per cent. The total number of wells drilling at the close of the month was 1,132, showing a decrease of 121, the decrease being in the Pennsylvania and Indiana fields, while in Ohio there was an increase of forty-six. The number of rigs in course of erection was 610, showing an increase of thirty-five, and making the total decrease in new work under way eighty-six wells. The increase in new rigs is entirely in the Pennsylvania fields; Ohio and Indiana showing a decrease.

TRADE ITEMS.

(For other Trade Items see table of contents on page 21.)

John Gilman, of Gilman Bros., Boston, Mass., was in town on Friday.

J. L. Hopkins & Co. have obtained judgment against Robert M. Gilmour for $280.

Zimmer's quinine sulphate and other salts is offered by Merck & Co. in any quantity.

D. V. Moses, of A. Moses, Sons & Co., returned from Europe on the St. Louis on Saturday.

The London Nitrate Co. has declared a dividend of 8 per cent. for the year, payable on Dec. 3.

Willis H. Lowe, Boston representative of Fries Bros., New York, was in the city the past week.

The Eaton, Ind., bottle house will be idle for a few weeks, while prescription molds are being prepared.

A. Moses, Sons & Co. have recently received several lots of Mediterranean sponges direct from Greece.

Judgment for $218 has been secured against Edward C. Scofield by F. W. Devoe & C. T. Raynolds Co.

An award to supply the Washington Navy Yard 50,000 pounds pig lead has been made to James E. Pape, Jr., at $2,270.

Magnus & Lauer, this city, sole agents for E. Sachsse & Co., Leipzig, announce special offers on oil sassafras, artificial.

Special offers are made by the Schoellkopf, Hartford & Hanna Co. on page 33 which will appeal to close buyers. See adv.

The sale of some of the property of the Penn Plate Glass Company at Irwin, Pa., to J. Carlin for $8,050, was confirmed by the court.

The universal liquid filler manufactured by Wm. Waterall & Co., Philadelphia, fills perfectly and dries hard quickly; in fact, it is an ideal filler.

The cargo of linseed of 260,000 bushels mentioned on page 21 of our last issue, as loading at Duluth, was consigned to Spencer Kellogg, of Buffalo.

New crop oil of lemon is offered by W. J. Bush & Co, this city, who are prepared to offer advantages to those contemplating the placing of contracts.

F. C. Meyers, of the S. P. Shotter Co., of Savannah, Ga., who has been spending several days in the city on business, left on Wednesday last for home.

To supply the Navy Department 150,000 pounds mixed acid the bid of the General Chemical Co. at $5,430, with allowance of 42½c. for spent acid, was accepted.

The Proctor & Gamble Co., Cincinnati, refiners of all grades of cottonseed oil, offer tank cars free to purchasers. Bulk buyers should make a note of this.

J. H. McNulty, in addition to his duties as resident manager at Chicago, has been appointed assistant general manager of Pratt & Lambert, New York and Chicago.

The Sans Pareil bottle factory, of Hartford City, Ind., started operations a few days ago. About 125 hands are given employment. The factory will run day and night.

The Berlin Aniline Works, manufacturers of chloride of zinc, 98 to 99 per cent., offer in any quantity from their main office in this city or from their branch houses in Boston or Philadelphia.

The shipments of phosphate rock from the port of Savannah during the month of October amounted to 7,600 tons, 3,605 tons going to Hamburg, 2,248 tons to Honolulu and 1,807 tons to Rotterdam.

The Santiago Nitrate Co. has declared a dividend for the year of 10s. per share, which, with the interim dividend already paid, will make a total of 16 per cent. for the year, leaving £3,358 to be carried forward.

E. H. Patterson, of G. W. S. Patterson & Co., leaves New York on the 13th inst. for Auckland, New Zealand, via San Francisco. Mr. Patterson will visit all the gum fields of the island, and expects to be absent some months.

W. F. Wilson, formerly treasurer of the Consolidated Ice Company, of Pittsburgh, has become interested in the Heidencamp Plate Glass and Mirror Company, of Springdale. Mr. Wilson was a former resident of Parnassus, Pa.

If you are contemplating the purchase of machinery of any kind, and desire to be brought in contact with the different manufacturers, the Oil, Paint and Drug Reporter will be glad to supply full information upon receipt of request.

The Castner Kellner Co. has declared an interim dividend on the original capital, as well as on the new capital allotted to the shareholders of the Aluminium Company, at the rate of 8 per cent. per annum for the six months ending Sept. 30 last.

Jenkins Bros., New York, Chicago and Philadelphia, desire the readers of the Reporter to acquaint themselves with the merits of their excelsior straight-way back prepure valve, which is noiseless and free from any complicated attachments. Send for full descriptions.

The Cocheco Glue Works, of Dover, N. H., owned by Everett J. Stevens, of Malden, Mass., have been sold to the American Glue Works, of Boston. The same concern has also purchased a sandpaper plant at Edgeworth, Mass. Mr. Stevens will remain as manager of the Cocheco Glue Works.

Capt. O. J. Humphrey, of the Pacific Whaling Co. of San Francisco, who reached that port on the 1st inst. from Port Clarence, reports the Arctic fleet with five additional bowheads, making 78 for the season. The Karluk arriving with 7½ bowheads instead of 8½ makes the total catch 77 bowheads.

There arrived at San Francisco previous to Nov. 7 the steamer Alexander. from Arctic Ocean cruise; barks Andrew Hicks, from an eight months' cruise in the Okhotsk Sea, with 8,000 pounds of bone and 480 barrels of oil; California, from Okhotsk Sea, with 3,000 pounds of bone and 1,680 barrels of oil.

The directors of the Saltsburg Glass Company, of Saltsburg, Pa., are: Joseph McQuaide, Duquesne; H. L. Greer, Greensburg, and S. J. Robinson, Saltsburg. The company will rebuild the ten-pot furnace formerly operated by the Saltsburg Bottle Company, and it is proposed to rush the work to completion as rapidly as possible.

The report that Father Charles Dhe, of the National Window and Bent Glass Company, of Montpelier, Ind., had disposed of his interest in the firm and resigned as general manager of the concern is denied by the reverend gentleman. Mr. Dhe had tendered his resignation owing to pressure of business, but was induced to withdraw it.

The games of the Wholesale Drug Trade Bowling Association were resumed on Saturday. The competing teams were Seabury & Johnson, Johnson & Johnson and Dodge & Olcott on alleys 1 and 2, and National Lead Co., General Chemical Co. and Church, Dwight & Co. on alleys 3 and 4. The complete scores will appear in our next issue.

The Supreme Court of the United States at Washington, D. C., has denied the application of the Atlas Glass Company, of Washington, Pa., for a writ of certiorari in their suit against the Simonds Manufacturing Company, of this city, in which the former company sued the Simonds company for infringement of two patents on machinery for making glass bottles.

Owing to the resignation of Mr. Murphy as the resident agent of W. P. Fuller & Co., of San Francisco, Cal., they have appointed Mr. Charles B. Woodruff to the position. As Mr. Woodruff has been with the house in San Francisco for the last twelve years he is thoroughly conversant with their requirements and will receive a hearty welcome from the trade in New York.

At a meeting of the Board of Directors of the H. W. Johns Manufacturing Co. held on Oct. 26, Mr. R. H. Martin, because of his varied business interests outside of the company, tendered his resignation as president and director, which was accepted. Mr. H. W. Johns, Jr., was then elected president; Mr. F. S. Miller, vice-president; Mr. G. W. Gladwin, first vice-president, and Mr. W. H. Porter, director of the company.

George J. Seabury, president, tendered a collation to the Wholesale Drug Trade Bowling Association on Saturday afternoon. It is understood the occasion was the anniversary of Mr. Seabury's birth. There was a full attendance of the members of the association and a number of friends also participated. The event was characteristic of Mr. Seabury's generosity and was one long to be remembered in the annals of the association.

Zinkeisen & Co., importers and commission merchants, this city and Chicago, are sole agents for the United States for the products of Tombarel Freres, Grasse, France, who have received the gold medal at the Universal Exhibition, Paris, in their specialties of oils of geranium, lavender, neroli, orris concreto, rosemary, spike, thyme, sandalwood, etc. They are prepared to supply raw materials for perfumes and soap makers, promptly and in any quantity, on most favorable terms.

The Union Talc Company, incorporated recently under the laws of New York, with $1,000,000 capital stock, has absorbed the Columbia Talc Company, the American Pulp Co., and Kellar Brothers' Talc and Pulp Co., all having mines at Gouverneur, St. Lawrence county, N. Y. The new company will issue $600,000 of 6 per cent. 15-year gold bonds, dated Jan. 1, 1901, denomination $500 and $1,000, interest January and July; trustee, North American Trust Co. The stock is all of one class, in shares of $100. H. G. Hanford is president.

El Cablegrama, a newspaper published at the port of Carupano, Venezuela, in its issue of Aug. 22, 1900, states that the German Exploration Company, which has been authorized by the Venezuelan Government to exploit the sulphur deposits of the Chaguaramas district, has recently commenced work. The company has at the present time in its employ about 100 laborers. With this force and with the additional help that will be added when the abundance of the product to be extracted renders it necessary, the company expects to mine a large quantity of sulphur. The crude sulphur will be shipped from the port of Carupano to Europe and the United States.

The two special commissioners sent to Europe by the National Glass Company for the purpose of studying trade conditions return with interesting reports. While American glass has as yet made little headway in Continental Europe, there is an increasing demand for it in England. This is expected to eventually extend to Austria, Germany and even Belgium. The problem of introducing American glass into Europe is one of overcoming the greater wages paid in this country. In the American factories the workmen in certain departments receive $5 per day, as against $1 per day paid in Europe. Then, too, women and children are employed abroad at wages ranging from 12½ cents to 20 cents per day.

The seventy-third meeting and dinner of the Paint, Oil and Varnish Club will be held at the Drug Club, 100 William street, on Thursday evening next. The reports to be presented will include those of the delegates to the annual meeting of the National Paint, Oil and Varnish Association, held at Old Point Comfort, Va., and will prove unusually interesting. The musical program will include several vocal numbers by the Paint, Oil and Varnish Club Quartet, which has just been organized. Instrumental selections will also be rendered by an orchestra during dinner.

In consequence of the decline in price of phosphate rock and difficulty in obtaining ocean transportation, two big mining companies near Beaufort, S. C., have closed down for a time, and another is working only half of its plant. It is reported that the Goosaw Company has over 50,000 tons of rock ready for shipment, and is working half of its dredges, having no market as yet for its product. The Empire works, on Lady's Island, controlled by the Virginia-Carolina Chemical Company, and employing about 15 white and 200 colored pickers, has closed down. The Beaufort Phosphate Company, with about 25,000 tons of rock on hand, has closed down for 60 days.

(For other Trade Items see table of contents on page 21.)

PETROLEUM NOTES.

At Jackson Ridge, the Shawmut Oil Co. has completed No. 8 on the John Jackson farm and will have a 10-barrel pumper.

On the Ohio side in Harrison County, F. N. Donaldson has completed No. 3 on his own farm near Bowerston and has a 5-barrel pumper.

In the Meadville district in Tyler county, the South Penn has drilled in No. 11 on the R. A. Gorrell farm and has a 70-barrel producer.

On Middle Island Creek, Frank Holden & Co. have completed their No. 4 on the Johnson heirs' farm and have a show for a 50-barrel pumper.

On McFarland Creek, Ritchie county, the Sill Oil Co. has drilled its test well on the J. Dolan farm through the salt sand and has a light show of oil.

In the Wolf Summit field in Harrison county the South Penn Oil Co. has completed its No. 41 on the Hiram Lynch farm and has a 15-barrel pumper.

In the Stout district, in Doddridge county, the Carter Oil Co. has completed its No. 34 on the S. W. Stout farm and has a show for a 50-barrel producer.

In the extreme lower end of the Jarvisville field in Harrison county, the South Penn has completed its No. 2 on the Isaac R. Corder farm and has a 10-barrel pumper.

In the Wolf Summit field in Harrison county, J. M. Guffey & Co. have completed their No. 6 on the Amos M. Carter farm and have a show for a 10-barrel pumper.

West of Graysville, Monongalia county, No. 4 on the Catherine Murriner farm and No. 4 on the Albert Thomas far mare making 350 and 320 barrels a day respectively.

On Buffalo run, Wetzel county, the Kanawha Oil Co. has completed and shot its No. 60 on the John Mills tract and has a 60-barrel producer from the Gordon sand.

In the Burning Springs district, Stiles Bros. have drilled their No. 11 on the Volcano tract into the salt sand and have a show for a 5-barrel producer of lubricating oil.

In the Mt. Morris district, Greene County, the Marion Oil Co. has completed its No. 10 on the D. L. Donnelly farm and has a small producer good for less than five barrels a day.

In the Pine Grove development in Wetzel county, the South Penn Co. has drilled in its No. 2 on the J. R. Shreve farm and has a producer that made 40 barrels the first 24 hours.

West of Stringtown, Tyler county, in the Big Injun sand pool, the South Penn Co. has shot its No. 3 on the David Murriner farm and increased its production to 300 barrels a day.

In the Meadville district, in Tyler county, the South Penn Oil Co. has drilled its No. 10 on the R. A. Gorrell farm to the Big Injun sand and has a small pumper. The same company's No. 11 has been drilled into the Keener sand and is showing for 125 barrels a day.

East of the Whiskey Run pool in Ritchie County, Mallory Bros. have drilled their No. 3 on the B. P. Butcher farm, 20 feet into the Big Injun sand and have no show for a producer.

The Copley gusher on Sand Fork, Lewis County, is still holding up at 2,400 barrels a day. The pipe line is reducing the oil that was produced and stored in the tanks when the well was at its best.

South of the South Penn Oil Co.'s J. B. Whitman No. 1, near Wallace, Harrison county, the South Penn has completed a test well on the F. W. Gifford farm and has a show for a small pumper.

Northeast of Legionville, Beaver county, E. H. Jennings & Bros. have drilled in their No. 3 on the Thomas Whipple farm, and the gauge for the first four hours showed on an average 27 barrels an hour.

In the northeast extension of the Flat Run development in Monongalia county, W. Va., the South Penn Oil Co. has completed its No. 8 on the Denny Tennant farm and has a producer good for 150 barrels a day from the Gordon sand.

In the Wilson Run development, on the Ohio side, the Fearless Oil Co. has completed its No. 2 on the Frank Ellman farm and has a show for a very light producer in the Big Injun sand. This location is about two and one-half miles north of Rinards Mills.

At Legionville, Beaver county, Neeley & Son have drilled in their No. 6 on the John Hagen farm and have a show for a light producer. In the same development, Lamberton & Strohecker have drilled in No. 3 on the Bock heirs' farm and have a show for a small well.

On Elk Horn run, Doddridge county, and three-fourths of a mile northeast of the Carter Oil Co.'s well on the I. N. Riffer farm, Ingham & Co. have drilled in a test well on the Judson Hutson farm, and have a show for a 25-barrel producer after it has been shot.

In the Chester Hill shallow sand territory in Morgan county, Russell & Metzgar have completed No. 6 on the A. E. Murdock farm, and Hochstetter & Foreman have completed No. 3 H. Pugh. Each is good for 10 barrels a day. F. M. Selby & Co. have completed a test on the I. Mole farm and have a 20-barrel well.

In the shallow sand territory in Pleasants County, Edwards, Tudor & Co. have completed their No. 9 on the M. E. Bachman farm and have a producer that started at 140 barrels a day from the Cow Run sand. In the same county, Smith Bros. have completed a test well on the J. E. Smith farm and have a 25-barrel producer from the Big Injun sand.

The Keener sand development on the Ohio side, near Graysville, Monroe county, is giving up some light producers. The average size was above 25 barrels last month. The Devonian Oil Co. has completed its test on the Duncan Dougherty farm and have a 5-barrel pumper. Fertig & McCandless have completed No. 2 J. W. Jones, and have one of the same kind.

In the Buffalo Run district, east of the Mills tract, Wetzel county, W. Va., the Kanawha Oil Co. has drilled in a second well on the J. R. Davis farm and has a 75-barrel producer from the Gordon sand. In the Pine Grove district, in the same county, the same company has completed its No. 15 on the L. S. Hoyt tract and has a producer good for 100 barrels a day from the Gordon.

The 100-foot development on Crows run, Beaver county, is to the front with another good producer. The Kamerer Oil Co. has drilled in its test well on the Kamerer farm and has a producer that started at 40 barrels an hour, but later it dropped to 25 barrels an hour. Aside from size, this is an important well as to location. It shows quite a little extension to the northwest of other producing wells in the development.

The imports of petroleum into British India amounted to 76,265,000 gallons, value Rs. 29,858,000, in 1898-99, as compared with 87,300,000 gallons, value Rs. 36,518,000, in 1897-98. These quantities arrived in freight and in cases from the following countries: In freight (tank steamers) from Russia, 18,974,000 gins.; Sumatra, 2,859,000 gins. In cases from Russia, 31,825,000 gins.; the United Russia, 31,825,000 gins.; Sumatra, 1,583,000 gins.; Straits Settlements, 323,000 gins. The principal markets are: Calcutta, Bombay, Madras and Kurrachee.

J. M. Guffey's well in Lewis county, W. Va., started to flow late last week and was spouting oil at the rate of 250 barrels an hour. This is 6,000 barrels a day, and, at $1.10 a barrel, is worth $6,600 every twenty-four hours. The well adjoins the famous Copley farm gusher, which for more than two weeks earned nearly $8,000 a day. The well is on a farm owned by four maiden sisters who get between $900 and $1,000 a day in royalties.

On the Ohio side, in the Keener sand development, near Graysville, Monroe county, the Devonian Oil Co. has completed and shot its No. 2 in the John Hickenbottom farm and has a show for a 45-barrel producer. Shay, McMullin & Co. have completed a test on the W. J. Crawford farm and have a 25-barrel well. The Gray Oil Co. has drilled in its No. 2 in the Bradford Gray farm and will have a 20-barred pumper. F. L. Money & Co. have completed a test well on the Thomas Bishop farm, and have a light well, good for less than 10 barrels a day. S. Galey & Co. have completed No. 2 on the James Cline farm and have a show for a 45-barrel producer.

OBITUARY.

Osgood Field.

Osgood Field, formerly connected with the chemical firm of Osgood Field & Co., of London, England, and well known in the chemical and drug trades of this city by the other merchants, died recently in Paris, France.

Mr. Field was born in New York in 1823, went to London in 1845, and has since resided abroad. He made a fortune in business in London, and in 1870 he retired. In 1860 he married, in London, Miss Catharine R. Parker, daughter of the late Milton Parker, of Utica, New York, and a cousin of Mrs. J. Pierpont Morgan. Mr. and Mrs. Field occupied the Palazzo Colonna in Rome for many years and were prominent in the American colony there. Mr. Field's surviving relatives in New York are a brother, Franklin Clinton Field; Mrs. Augustus Field and her children, Mrs. Henry W. Payne, Thomas P. Field and Augustus B. Field, and Mrs. William H. Field and her children, Miss Mary Field and William Osgood Field.

MISCELLANEOUS.

The Tarrant Fire Inquiry.

The Fire Marshal is conducting an investigation as to the cause of the fire and explosions which resulted in the destruction of Tarrant & Co.'s building and the wrecking of buildings adjoining. The inquiry is secret and only such of the testimony as the marshal sees fit to make public is given out. Mr. Thomas F. Main, president of Tarrant & Co., was before the marshal during the past week. On adjournment the officials gave a synopsis of part of his testimony, admitting that they did not give it in full.

Mr. Main told of his usual occupation in the Tarrant Building. He knew little of what went on outside of the drug department on the first floor. What explosives or dangerous drugs or articles were in the building were in small quantities and in conformity with a permit obtained from the Bureau of Combustibles. He did not know that prohibited articles were received in the storage department. He was ignorant of the presence in the building of the seven drums of aniline oil stored by the Schoellkopf, Hartford & Hanna Company. Mr. Main said that he could not remember the names of all of the firm's employes, but promised to furnish a list of them.

Two safes of Tarrant & Co. were taken from the ruins last Wednesday and removed to warerooms to be opened in the presence of the Fire Marshal, District Attorney and representatives of the firm. One safe is large and the other small. Both were in the Tarrant office on the first floor. Neither safe is damaged much. The large safe was readily opened and its contents found intact and apparently not damaged, except by water. Nothing was found in the safes to sustain the theory of the Fire Marshal that Tarrant & Co. had large quantities of explosives on the premises.

The original theories as to the cause of the explosions have been abandoned by the authorities, who have since shifted the cause to other substances said to have been stored in the building, the latest being it was due to several drums of aniline oil, and the daily press has printed similar sensational accounts of this article of similar tenor to those which appeared when it was claimed the explosions were due to chlorate of potash. It would be well to await the result of the investigation. At present there is as much uncertainty as to the cause as there was two weeks ago.

The body of Benjamin Moorehouse, the clerk of Tarrant & Co., who had charge of the storage department, and who was said to have been spirited away by the firm that his testimony could not be secured, was found in the ruins on Thursday. This vindicates Mr. Main, who has all along contended that he had nothing to conceal and desired the most thorough investigation be made and that the cause for the disaster be officially and conclusively determined.

The N. A. R. D. Plan Reaffirmed.

Practically the entire drug jobbing trade was represented last week at a meeting called by C. F. Shoemaker, of Philadelphia, who is chairman of the Proprietary Committee of the National Wholesale Druggists' Association. The meeting was held in the rooms of the Board of Trade.

The N. A. R. D. plan, known as the tripartite agreement, which is a compact between proprietors, wholesalers and retailers pertaining to rebates, was reaffirmed by the adoption of a set of resolutions pledging loyalty to the agreement. A copy of the resolutions was not obtainable.

The meeting had its inception because of violations of the agreement in other sections of the country, and also attempts that have been made to make an inroad into the business loyalty of the New York drug men who stand for the tripartite agreement.

From all that could be learned, the resolutions which they passed destroy completely any chance of the repudiation of the three-fold trade agreement against rate cutting. This agreement is not yet in force here, but it is believed that the labors of the canvassers appointed by six retail associations in this vicinity will result in an indorsement of the plan by at least 75 per cent. (the requisite number) of the trade here.

Paint, Oil and Varnish Club of Colorado.

Representatives from all the jobbing paint houses in the State of Colorado, together with a number representing kindered interests, met Nov. 2 at the Brown Palace Hotel in Denver, and, after partaking of an elegant banquet, formed the Paint, Oil and Varnish Club of Colorado.

There was much enthusiasm expressed by all present, and the club was launched under circumstances most favorable to a long and useful life. The officers elected to serve for one year were as follows:—

President—J. G. McMurtry, Denver.
Vice-President—J. T. Minehart, Denver.
Treasurer—B. L. James, Denver.
Secretary—W. B. Sale, Denver.

The above officers, together with Louis Florman, of Pueblo; H. N. Jones, of Denver, and W. F. Meyer, of Denver, constitute the executive committee.

Paint Grinders' Association Meeting.

The annual meeting of the Paint Grinders' Association of the United States will be held at the Imperial Hotel in this city, commencing on Tuesday, Nov. 13, at 10 A. M. In a circular to the trade Wm. L. Davies, president of the association, says:—

"It is perhaps unnecessary to state that the abnormal conditions with which we are confronted demand a large and thoroughly representative attendance. The present and prospective market for raw material, particularly linseed oil, necessitates immediate and preferably united action in the direction of revising and advancing prices for all manufactured products, and a full and free discussion covering this question will naturally be of the greatest interest to all.

"The following subjects came before the association at the last annual meeting, were discussed, and placed in the hands of special committees for consideration, with instructions to report at the next meeting:—

" 'Paint Grinders' Credit Bureau.'

" 'In the face of existing conditions, the possibility or advisability of grinders combining in the matter of purchasing raw material.'

" 'What is the average cost of manufacturing and marketing our products, irrespective of the cost of raw material?'

"It has been suggested that a thorough discussion of this important subject would be decidedly educational in character, and have quite a bearing on competition, based upon what seems at times to be a wrong conception of what it actually costs to produce and market goods. Other subjects of mutual interest will be presented for consideration and discussion, and attendance at the meeting, even if it were only for the purpose of interchanging opinions and experiences, could not fail to be productive of benefit and profit to all concerned. Under existing conditions it is certainly very desirable to work in harmony, and, as far as possible, co-operate with each other in an endeavor to improve the general situation. The meeting, in consequence, should thoroughly represent the paint manufacturing industry of the United States."

St. Louis Drug Trade Bowlers.

The Moffitt-West Drug Co. team of the Druggists' Cocked Hat League, captured the odd game from the Meyer Bros. Drug Co. team on the 1st inst. The winners had little difficulty in disposing of their adversaries, totaling over 100 more pins. The feature of the match was the work of Wetzel, of the Moffitt-West team, who broke the Druggists' League record by totaling 298 pins, bad breaks in his second essay, in which he counted 38, preventing him from averaging away above 60. In the third game he counted 81. Graham and Neu were the best performers for the Meyer Bros. team. Score:

MOFFITT-WEST DRUG CO.

Name.	C.	M.	1.	2.	3.	4.	5.	Tl.	Av.
Nieman..	4	21	55	54	39	49	48	245	49
Reisse....	5	29	48	69	50	39	42	248	49 3-5
Waldeck..	2	53	37	44	32	30	40	183	36 3-5
Wetzel....	2	21	60	38	81	59	60	298	59 3-5
Kunz.....	4	29	52	35	41	45	46	219	43 4-5
Totals..	17	153	252	240	243	222	236	1193	47 18-25

MEYER BROS DRUG CO.

Name.	C.	M.	1.	2.	3.	4.	5.	Tl.	Av.
Hobbs....	6	36	40	56	38	38	49	221	44 1-5
Hockin....	5	28	47	32	33	43	53	208	41 3-5
Lawrenz..	4	44	47	53	35	34	32	201	40 1-5
Graham..	3	43	28	64	54	53	33	232	46 2-5
Neu.....	6	30	36	55	34	57	40	222	44 2-5
Totals..	24	191	198	260	194	225	207	1084	43 9-25

The Searle & Hereth Co. team won the odd game from the Mound City Paint and Color Co. team on the 1st inst. The winners were quite fortunate in winning the contest, as they landed two of their games by margins of four pins. They also missed more and scored a great many less than their opponents. David, with almost a 51 record, excelled for the winners, with Schildman in the place. Schneider secured one more point than Bruen and led the Mound City team. Score:

MOUND CITY PAINT AND COLOR CO.

Name.	C.	M.	1.	2.	3.	4.	5.	Tl.	Av.
Schneider.	2	33	39	57	34	59	42	231	46 1-5
Bruen.....	6	24	40	47	44	53	46	230	46
Woehrlein	6	29	57	42	33	40	48	226	45 1-5
Nay.....	4	20	53	39	41	52	49	234	46 4-5
Aszman..	11	26	42	36	46	40	30	194	38 4-5
Totals..	29	132	231	221	198	250	215	1115	44 15-25

SEARLE & HERETH CO.

Name.	C.	M.	1.	2.	3.	4.	5.	Tl.	Av.
Blitz.....	7	29	55	39	43	31	36	204	40 4-5
Habbeger	10	46	38	40	29	38	34	179	35 4-5
Schildman	4	29	41	41	47	44	55	228	45 3-5
Decker....	6	36	56	31	37	40	41	205	41
David.....	5	16	45	44	46	59	59	253	50 3-4
Totals..	32	156	235	195	202	212	225	1069	42 19-25

The J. S. Merrell Drug Co. team, the leaders, and the Eli-Lilly Co. team, the tail enders, met on the 1st inst. The tail enders bowled well and won three of the games, and only one pin in the final attempt kept them from placing four games to their credit. The Merrill team got the worst of the breaks, recording sixteen more one-pin breaks. Enderle, with one game of 71 and a total of 283, excelled for the winners. Brenner averaged 49 and came next. Kahre and Helbig were the best for the Merrill team. Score:

J. S. MERRELL DRUG CO.

Name.	C.	M.	1.	2.	3.	4.	5.	Tl.	Av.
Helbig....	8	29	53	42	33	41	44	213	42 3-5
Pange....	7	34	54	44	35	35	43	201	40 1-5
Severson..	6	34	37	44	48	40	38	207	41 2-5
Dicknite..	10	33	49	37	45	46	33	210	42
Kahre....	7	19	46	57	41	48	48	240	49
Totals..	38	149	239	224	202	210	206	1071	42 21-25

ELI-LILLY CO.

Name.	C.	M.	1.	2.	3.	4.	5.	Tl.	Av.
Brenner...	4	15	46	58	40	53	48	245	49
Ernst.....	3	39	24	56	44	36	43	203	40 3-5
Self.....	5	31	46	39	50	46	39	220	44
Rose.....	2	42	33	35	37	43	32	180	36
Enderle...	8	12	58	71	49	62	43	283	56 3-5
Totals..	22	139	207	259	220	240	205	1131	45 6-25

Baltimore Drug Trade Bowlers.

In the Wholesale Drug Trade Club series on the 2d inst., Sharp & Dohme won all three games from Parke, Davis & Co. Dohme made high score (179), also high individual average (162 2-3) for the Dohmes. Brown made high score (165) and Erich high average (141 1-3) for the Parkes. Scores:—

SHARP & DOHME VS. PARKE, DAVIS & CO.

Goldsboro..	118	141	162	Erich	145	157	121
Dickson....	136	113	140	Brown	165	101	147
Sattler.....	134	162	145	Meiser	102	104	156
Kornmann.	115	122	124	Gilner	110	113	121
Dohme.....	179	143	166	Pindell	121	128	153
Totals....	682	681	737	Totals.....	644	603	678

Sharp & Dohme's average, 700; Parke, Davis & Co.'s average, 641 2-3.

New Corporations.

The Weis Drug Co., at St. Louis, Mo., to manufacture drugs. Capital, $5,000. Incorporators: J. L. Weis, Cecilia West, Lizzie Boul, all of St. Louis.

The Empire Baking Powder Co., at New York city, to manufacture baking powder. Capital, $1,000. Incorporators: B. S. Heller, F. Jellenik, N. D. Stern, all of New York city.

Dr. Greene's Tablet Co., at Rochester, N. Y., to manufacture drugs and medicines. Capital, $10,000. Incorporators: R. J. Strasenburgh, C. Blauw, R. E. Saffold, all of Rochester.

The Rockefeller Soap Co., at Brooklyn, N. Y., to manufacture soap and soap powders. Capital, $1,000. Incorporators: Edgar Rockefeller, David H. Dugan and E. J. Dugan, Jr.

Peter Van Schaak & Sons, at Chicago, Ill., to deal in drugs and chemicals. Capital, $200.000. Incorporators: E. C. Ferguson, C. N. Goodman, C. S. Berwin, all of Chicago.

The Thompson Medical Co., at Catskill, N. Y., to manufacture proprietary medicines. Capital, $2,000. Incorporators: F. C. Thompson, of Catskill; L. H. Burdick, G. Logan, both of Albany.

The M. B. Suydam Co., at Pittsburgh, Pa., to manufacture varnishes, etc. Capital $1,000. Incorporators: R. S. Suydam, M. B. Suydam, C. G. Zug, J. T. Lazear, all of Pittsburgh; J. B. Orr, of Glenshaw.

The Saltsburg Glass Co., at Saltsburg, Pa., to manufacture bottles, etc. Capital, $1,000. Incorporators: H. L. Greer, of Greensburg; J. R. McQuaide, of Duquesne; S. J. Robinson, W. S. Moore, H. H. Robinson, all of Saltsburg.

The Lever Bros. Limited Philadelphia works, at Charleston, W. Va., to make soap. Capital, $1,000,000. Incorporators: A. H. Larkin, of Nutley, N. J.; L. H. Freedman, of Pelham Manor, N. Y.; H. J. Bingham, G. E. Hargrove, W. H. Faire, all of New York city.

Latest Tariff Decisions.

Solide Siccatif or Siccatif Powder.

F. G. Strohmeyer and H. Arpe imported at New York certain merchandise which was invoiced as "solide siccatif" and as "siccatif powder." The merchandise consists of irregular shaped lumps of a dark color, resembling gum-resin in glossy appearance, but is of rather lighter weight. It was returned by the local appraiser as chemical compound, and duty was assessed at 25 per cent. ad valorem under par. 3 of the act of 1897, and the importers claimed that it was dutiable at 20 per cent. ad valorem as a non-enumerated, wholly or partly manufactured article, under section 6, or by similitude, component material or otherwise, under section 7 of said act.

The Board found as a fact (1) the merchandise is composed of resinate of lead or resin and compounds of lead, manganese and lime, the functions whereof being—in the order of their importance—to wit: The manganese and lead to impart drying properties to varnish, linseed oil, or paint; the lime to act as a hardener, and the resin to serve as a vehicle for the other compounds. It is therefore a chemical compound. (2) That it is known generally in commerce as "Varnolette," being especially adapted for use as a varnish drier, varnishes being largely made from linseed oil and resin, the former acting as a solvent for the latter. The resin in varnolette serves as a vehicle without imparting any objectionable quality to the varnish. It is, however, adapted for, and is sometimes used, as a drier in paints, inks and stains, instead of japan or litharge; the term "siccatif" or "siccative" being equivalent to that of drier.

According to the chemist's report, "driers" of the kind here in question are prepared in two ways: (1) By precipitation, which produces a more definite composition than when otherwise prepared. (2) By fusion; the advantage of which process is in the fact that the product is free from water, which is always present in the precipitated article, and the presence whereof is objectionable. The merchandise in question here was prepared by the latter process (fusion).

The Board in its decision says: "It would appear that while merchandise of this kind is prepared in such a manner that the consumer may depend upon a certain percentage or quantity of the active drying ingredient, and on its commercial character and value for the uses intended, its actual chemical composition is somewhat complex and obscure." The protests were overruled and the assessment of duty affirmed.

Carbolic Soap.

Canton, Bell & Co. imported at San Francisco certain merchandise which was invoiced as "One iron drum carbolic soap." It consists of a stiff, unctuous brown-colored paste of pronounced soap-like smell, and having been returned by the appraiser as "carbolic soap medicated," was assessed for duty at 15 cents per pound under the provision for "medicinal or medicated soaps," in par. 72, act of 1897. It was claimed by the importers to be dutiable either at 20 per cent. ad valorem under the provisions of said paragraph and act, or at the same rate under sec. 6, or at 25 per cent. ad valorem as a chemical compound under par. 3, or at ¾ cent per pound under the provision for "caustic soda," in par. 76, or at one-fifth of one per cent. per pound as "bleaching powder or chloride of lime," under par. 8 of said act. The protestants stated that it is used for spraying trees, flowers, and plants, to kill insects, acting thereon as sheep dip does upon sheep; that, although called "carbolic soap," it is not actually a "medicated" or other soap, nor is it used as such, but is an "insecticide," and has to be reduced to a liquid state for use.

The Board found as a matter of fact (1) that the merchandise in question "consists of potash and soda soap, to which carbolic acid has been added, and that it is intended for use, and "is used," as a disinfectant and antiseptic wash." It dissolves readily in either cold or warm water and is easily agitated into suds. (2) All soap, whether used medicinally, sanatively, or for laundry or the other purposes for which soaps are intended, are, as a rule, reduced to a semi-liquid condition, or to suds, prior to or in the course of their use. A principal use of most medicated soaps is as insecticides, germicides, disinfectants or as antiseptics, by external application, to remove or destroy destructive insects, bacterial germs or microorganisms, thereby preventing injury from putrefactive fermentation, septic infection or otherwise, and thus operating as a preventative or remedy of disease.

The protest was overruled and the assessment of duty affirmed. (See G. A. 2056, 2616, 3320, 3396 and 4691, and Park & Tilford vs. U. S., 66 Fed. Rep. 731.)

(Special Correspondence to the Reporter.)

The Free Alcohol Claims.

Washington, Nov. 9, 1900.

The full text of the decision of the Court of Claims in the American Aristotype Company's case, which represents the second attempt of the free alcohol claimants to secure rebate of the Internal Revenue taxes paid by them on spirits consumed under section 61 of the Wilson Act, shows that the court has paved the way for a speedy appeal to the United States Supreme Court for the retrial of the issues involved. Under ordinary circumstances it would now be in order for counsel for the claimants to ask permission to amend their petition in the hope of adding some material fact that would strengthen it by bringing in a new issue not covered by the decision in the Dunlap case. That the court anticipated this action, however, is shown by the text of the decision which has been made public and which is as follows:

"This case having been submitted on demurrer, after due consideration of the allegations of the amended petition, the court decides, as a conclusion of law, that the allegations of the petition are not sufficient in law to entitle the claimants to recover; the demurrer is therefore sustained, and the case dismissed; and as it is apparent to the court that the alleged cause of action is incapable of amendment, leave to amend would be fruitless.

"The question involved in this case having been fully decided by this court in the case of Dunlap v. the United States (33 C. Cls. R., 135,) and affirmed by the Supreme Court in 173 U. S. R., 65, it is not now necessary to state the reasons upon which the court predicates its judgment that the demurrer be sustained and cause dismissed."

It will be seen that the court declines to permit any further amendment to the petition, and as the claimant's allegations with respect to the reductions made in prices in expectation of securing rebate of tax were before the Court of Claims when its decision was rendered on the demurrer of the Government no further litigation in the lower court is possible. The record will, therefore, be prepared as speedily as possible, and transmitted to the Supreme Court, where the hearing on appeal will take place as soon as the case can be reached on the docket, and sooner if the Attorney General can be induced to unite with counsel for the claimant in a request to advance the case for argument.

The campaign for the passage of the relief bill to give the free alcohol claimants another day in court will begin promptly with the opening of the session of Congress, and in recognition of the influence of the Senate Finance Committee with regard to this and similar legislation, practically all the communications now coming to Washington with regard to the relief bill are addressed to Senator Aldrich. Following are extracts from a few of the more recent letters from large users of alcohol:

Robert A. Hance, Philadelphia, Pa.—Regarding our claim for rebates, which would be affected by the enactment of Senate bill 2283, we wish to state that after section 61 of the revenue act of 1894 was enacted we were getting less money for our goods, as the discounts from our list prices were increased, owing to our expectation of receiving the rebate, thus making our goods cheaper to the consumer. This in spite of the fact that the cost of our alcohol was increased about 40 cents per gallon, by reason of the higher tax imposed by the Wilson tariff. We also wish to state that we, as well as the others in our line who have claims under section 61, are heavily burdened with the war revenue tax, we having to pay a stamp tax on our goods, from which we get no return, and which is a direct expense to us. Since we are called upon to pay this special tax to the Government, we feel that it would be only just that the Government keep its word and refund the tax due us.

Berry Bros., Detroit, Mich.—In relation to Senate bill 2283, in which we, as manufacturers of varnishes on a large scale, are deeply interested, we wish to state that in expectation of receiving a rebate on alcohol used in the arts, as promised by section 61 of the revenue act of August 28, 1894, we made considerable reduction in the selling prices of all shellac varnishes in which grain alcohol was used as a solvent, during the twenty-one months that section 61 was in force. This was done in spite of the fact that we paid nearly 40 cents per wine gallon more for the alcohol used by us, on account of the increase of 20 cents per proof gallon in the internal revenue tax on alcohol. Since the Government's failure to pay us the rebate to which we think we are clearly entitled has caused us a serious financial loss, as well as a disappointment, we would respectfully urge your committee to favor the enactment of the bill introduced by the Hon. O. H. Platt, of Connecticut, so that we, and the other manufacturers interested, can prosecute our claims in the United States courts.

S. W. Gould & Bros., Malden Mass.—As manufacturers of extract of witch hazel, using alcohol as a preservative only, we have a claim for rebate on the internal revenue tax on alcohol used in our industry under section 61 of the Wilson tariff law. We have not been able to collect this claim, because of the failure of Secretary Carlisle to make regulations for paying us the rebates to which we became entitled while section 61 was in force; and we are therefore interested in the enactment of Senate bill 2283, introduced by Hon. O. H. Platt. In regard to our claim we would respectfully state it is just and ought to be paid by the Government for these reasons: When the increasd revenue tax was put on alcohol by the Wilson law we did not raise our prices, though paying nearly 40 cents more per gallon for our alcohol on account of the higher tax. And as our competitors were selling their goods at lower prices in anticipation of receiving the rebates we were forced to do likewise, and instead of getting higher prices, we sold our goods for less than we received before the tax was raised. Thus section 61 caused us a heavy loss through holding out the promise that we would receive a rebate of the tax on alcohol used in our preparations, and we would ask that Congress should now grant us relief from conditions for which a law of Congress is responsible.

McCoy-Howe Company, Indianapolis, Ind.—In relation to Senate bill 2283, we beg to state that we have a claim for rebates under section 61 of the revenue law of 1894, and that notwithstanding the tax on alcohol was increased from 90 cents to $1.10 per proof gallon (equal to an increase of about 38 cents per wine gallon of commercial alcohol) we made no increase in the price of our goods. We certainly believed that when a law was once enacted by Congress, as was plainly done in the case of section 61, there would be no question as to our right to recover the rebates given by the law, consequently we governed ourselves accordingly in fixing our prices, and are satisfied that most of the other manufacturers in our line acted on the same understanding, as there was a general reduction going on by the various competing houses. For our own part we have sustained a loss nearly, if not fully, equal to the amount of rebates due us on alcohol used from the time section 61 was enacted until it was repealed, and we think that it is clearly the duty of Congree to enact the bill introduced by Senator Platt, of Connecticut. Besides our loss through failure to receive these rebates we have had to bear the burden of the war revenue law, as we have not been able to increase our prices to cover the expense of the special stamp tax levied on our goods. In view of these facts we would ask your favorable consideration for the bill to allow the United States courts to pass upon our claim for rebate.

Norwich Pharmacal Company, Norwich, N. Y.—As grain alcohol is an important material in the manufacture of our pharmaceutical preparations we are interested in the enactment of Senate bill 2283, introduced by Hon. O. H. Platt, of Connnecticut. In connection with this bill we wish to state that we used a large quantity of alcohol in our laboratory while section 61 of the Wilson tariff law was in force, and as we believed and expected that we would receive the rebates promised in that law, we made large reductions in the selling prices of our preparations into which the alcohol entered. Our action in thus reducing prices was forced upon us by leadng houses in the trade, who quoted prices to our customers that were practically based on tax-free alcohol. Since the failure of the Government to pay us these rebates has inflicted on us a serious financial loss, we would submit that it is the duty of Congress to provide means by which our just claims may be paid.

The Tilden Company, New Lebanon, N. Y.—In conection with the bill introduced by Senator O. H. Platt (Senate bill 2283) we beg to state that as manufacturers on a large scale of standard pharmaceuticals and fluid extracts, we have a claim for alcohol used in our industry while section 61 of the Wilson law was in force. Although that law increased the tax about 40 cents per gallon on alcohol of the strength used by us, we made no increase in the price of our goods, as we expected that the rebates would be paid us by the Government. As alcohol is an important raw material in our business, the increased cost, through the additional tax caused us a direct loss. The stamp tax levied on our goods by Schedule B of the war revenue law has also been partially paid by us, and we think this fact should have some weight with your committee when the Russell bill is under consideration. It surely cannot be right for Congress to make one or two industries pay a special tax on their products, and then refuse to pay the same manufacturers rebates of internal revenue taxes which were promised them by law.

The G. F. Harvey Company, Saratoga, N. Y.—We are a corporation under the laws of the State of New York, incorporated in 1890, and doing a large business as manufacturing chemists, having at the present time 65 salesmen on the road, including Canada. These men cover every State in the Union from Maine to Texas, and east of the Mississippi River, also a few States on the west side of the same, and we have a local agency in California, which also sends out representatives. Our goods are standard pharmaceutical products which we sell direct to physicians through our salesmen calling upon them at regular intervals of time. We are therefore large users of alcohol (grain) in our business, and were at the time of the passage of the revenue act of August 28, 1894, embodying section 61. At that time, notwithstanding the greatly increased taxes upon alcohol, having faith that the Government would rebate the tax to us in accordance with the provision of the said section 61, we made no advance whatever in the price of our goods into which alcohol entered as a part, nor have we done so since. We have, therefore, lost nearly forty cents per proof gallon on all the alcohol used by us for six years, and the consumers of our goods have received the benefit. Of course, our position in this matter is the same as many others, and we certainly feel that a great injustice has been done by the decision of the Supreme Court in their decision of the Dunlap case, which, if permitted to stand, causes us a heavy loss, which we might have saved, except for our confidence in the intentions of the Government according to the terms of section 61. A very great injustice has been done the houses in our line of business, and other users of alcohol for manufacturing purposes, and we feel there can be no doubt whatever but that Congress will see the unfairness of the Government's position under status, and enact such legislation as will provide for the payment of these claims.

Southern Perfumery Company, Atlanta, Ga.—We wish to call the attention of your honorable committee to the bill now pending before the Senate, which provides for the refunding of tax paid on alcohol used in the manufacture and arts under section 61 of the revenue act of 1894. From 1894 to the time this act was repealed we were engaged in the manufacture of perfumes, flavoring extracts and other compounds requiring the use of a large per cent. of alcohol. Although the increase of alcohol and high proof spirits was from $1.80 to $2.20 per gallon, or about 38 cents per gallon for commercial alcohol, we did not increase the price of our products, but in many instances increased our discounts to the trade, depending on the honorable Secretary of the Treasury to formulate regulations looking to the refunding of tax on spirits used in the manufactures and arts. In view of these facts we would ask favorable consideration from your honorable committee for the bill introduced by the Hon. O. H. Platt, of Connecticut.

Central Pennsylvania Chemical Works, Reedsville, Pa.—We beg to advise you that the impression that the promised rebate on tax paid alcohol used as in our case in the manufacture of medicines should not be paid, for the reason manufacturers did not reduce their prices, and this rebate would, therefore, be in the nature of a bonus, is in our case and in all cases coming under our observation, an entirely erroneous impression. We did not reduce our prices, but we increased the size of the bottles used for all articles containing preparations in which alcohol was a constituent by about one-third. Our competitors increased the size of their bottles and containers, and we were obliged to also enlarge ours, notwithstanding that we not only never received our promised rebates, but are paying a greatly enhanced price for alcohol, and $1½ to 6 per cent. war tax in addition. We have never been able, through stress of competition, to again adopt our previous smaller sized bottles.

We feel that our trade and business have been singled out and oppressed with war tax and internal revenue charges far beyond any other business or calling in the United States. We are willing to cheerfully furnish our just share and proportion of Government revenues, but entreat that you permit us to keep at least enough of our earnings to provide our families salt and potatoes. Should the committee desire to see the size bottles used prior to the promise of free alcohol and those subsequently used, we will be pleased to submit them, accompanied with an affidavit as to the correctness of our statement, or if required will submit the bottles in person.

H. H. Hay & Son, Portland, Me.—Referring to Senate bill 2283 in regard to payment of claims on tax free alcohol it seems to us only just that these claims should be allowed as provided under section 61. Although we did not reduce our prices in anticipation of this rebate, many did, and the unfair competition thus brought was an injury to our business. If the rebates were allowed they will offset the loss in volume of business. In regard to the Wilson bill and Schedule B, we are able to get an advance in the price of our goods for only three months, when we were obliged to return to old rates. This is a double injustice to us, as we are obliged to pay the advance in price of alcohol and again the cost of stamps, making a double tax. We believe claims for rebate should be allowed, the present tax reduced and the stamp tax on proprietary medicines removed. Most of the articles made by us are necessities—not luxuries—and in our opinion should bear no tax.

Albany Chemical Company, Albany, N. Y.—As treasurer of the Albany Chemical Company, having personal knowledge of the facts, I beg to respectfully submit the following statement in regard to the claim of said company for rebates on alcohol used under section 61 of the revenue act of August 20, 1894. 1. That the Albany Chemical Company is a corporation engaged in the manufacture of standard chemicals, having its principal place of business at 2-24 Broadway, city of Albany, State of New York. 2. That in the manufacture of many of such chemicals alcohol is an important and necessary raw material. 3. That the revenue act of August 28, 1894, increased the internal revenue tax on alcohol from 90 cents to $1.10 per proof gallon of commercial alcohol. 4. That the same act provided that: "Any manufacturer finding it necessary to use alcohol in the arts, or in any medicinal or like compound, may use the same under regulations to be prescribed by the Secretary of the Treasury, and on satisfying the collector of internal revenue for the district wherein he resides or carries on business that he has complied with such regulations and has used such alcohol therein, and exhibiting and delivering up the stamps which show that a tax has been paid thereon, shall be entitled to receive from the Treasury of the United States a rebate or repayment of said tax so paid." 5. That as a result of this explicit promise on the part of the Government to refund the tax on alcohol in the arts, the prices of all the products manufactured by said Albany Chemical Company, of which alcohol was a competent part, were materially reduced, because of the expectation of many manufacturers that section 61 would be carried into effect in the same manner as all other sections of the revenue act of 1894 were executed. 6. That even if the Albany Chemical Company had wished to maintain the prices of its products it could not have done so, because of the reduction in prices of the same articles by competing manufacturers, who acted on the inducements held out by the Government. 7. That the promise of the Government to pay rebates of the tax on alcohol used in the arts prevented the Albany Chemical Company from raising the prices of their products to correspond with the increase of 37 cents per gallon in the cost of each gallon of commercial alcohol. 8. That the decision of the Supreme Court of the United States in the test case of R. Dunlap & Co., that the failure of the Secretary of the Treasury to issue regulations for the use of alcohol in the arts, as required by section 61, destroyed the rights of the manufacturers to the rebates of the tax on alcohol used in the arts during the period of twenty-one months that the law was on the statute book, has inflicted a heavy financial loss on said Albany Chemical Company.

(Special correspondence to The Reporter.)

Drawback on Coal Tar Colors

Washington, Nov. 9, 1900.

The Treasury Department has issued regulations for the allowance of drawback of duty on imported coal tar colors used in the manufacture of so-called butter colors as follows:

"On the importation of improved butter color, manufactured by the Wells & Richardson Company, of Burlington, Vt., in the manufacture of which was used aniline or coal tar colors imported in bulk, prepared under certain fixed formulas, a drawback will be allowed equal in amount to the duties paid on the imported materials used, less the legal deduction of 1 per cent.

"The entry under which the merchandise is to be inspected and laden must show the mark and number of each shipping package and the contents thereof, described as they are described in the export invoice. The actual quantity of improved butter color contained in each shipping package, and in the entire shipment, must be stated in gallons in the said entry. Each shipping package must be stenciled to show the number of dozen, the kind, and the nominal size of unit packages contained therein.

"The drawback entry must show the number of dozen of unite packages of each size and description exported and the actual contents of the same per dozen in gallons, stated separately for each size and description of unit package, together with the aggregate exported quantity stated in gallons. The quantity of each kind of the imported ingredients used, per gallon and in the aggregate, must also be shown. The said entry must further show, in addition to the usual averments, that the exported articles were manufactured of the materials and in the manner set forth in the manufacturer's sworn statement.

"In the liquidation of the entries, the quantities of the several imported materials used which may be taken as bases for allowance of drawback may equal those declared in the drawback entry after official verification of exported quantities and weights, but in no case shall such allowances exceed, for each of the exported articles, amounts based on the quantities of the several ingredients used per gallon, as shown in the manufacturer's sworn statement hereinbefore mentioned.

"Samples shall be taken or sworn samples furnished as ordered by the collector for such determination as may be considered requisite."

The Lard Supply.

Cable advices give the following estimates of the stocks of lard held in Europe and afloat on the 1st inst., to which are added estimates of former years, and stocks in cities named:—

	1900. Nov. 1.	1900. Oct. 1.	1899. Nov. 1.
Liverpool & Manchester	10,500	11,000	42,500
Other British ports	5,500	6,000	7,500
Hamburg	2,500	5,000	12,000
Bremen	2,000	1,500	3,000
Berlin	1,500	2,000	2,000
Baltic ports	7,000	8,000	7,000
Amsterdam, Rotterdam and Mannheim	1,000	2,000	1,500
Antwerp	3,000	3,000	4,000
French ports	4,000	4,500	3,000
Italian & Spanish ports	1,000	1,000	1,000
Total in Europe	38,000	44,000	83,500
Afloat for Europe	42,000	75,000	90,000
Total in Europe and and afloat	80,000	119,000	173,500
Chicago prime steam	11,250	49,896	117,391
Chicago other kind	9,080	10,832	9,487
East St. Louis	1,913	4,952	None
Kansas City	2,880	5,706	6,909
Omaha	3,413	1,344	2,049
New York	8,949	6,577	15,328
Total, tierces	117,494	198,307	324,664

Solubility of Substances Used in the Oil and Color Industries.

BY HERBERT ROBSON, B. Sc.

By solubility we ought to mean and to be entitled to understand the conversion of a solid into a liquid by contact with another substance or substances already in the liquid state, with or without the aid of heat. Nothing is known about solution, as the change from solid to liquid under these conditions is called, except the bare facts of the individual cases, so that there is no necessity for the writer to enter upon any theoretical disquisitions on the theories which have been broached on the subject. Sugar is soluble in water and platinum is not, but of the why and the wherefore we are utterly ignorant in both cases. We do not even know under which department of science the study of the phenomena of solution belongs. One point in the nomenclature of the subject, however, deserves attention. It is best to discard the term "melt" and its inflections altogether, as it is used indiscriminately to describe cases of solution of a solid in a liquid solvent, and cases of the liquefaction of a solid by sheer heat, without the intervention of any second substance, which certainly belongs to a different class of phenomena altogether. The proper word for this second kind of liquefaction is fusion. With regard to solution in general it is convenient to divide substances which have to be dissolved into organic and inorganic bodies, the former being those which are obtained from bodies which are or have been alive, i. e., from those of plants and animals, while the latter belong to the so-called mineral kingdom and are either dug directly out of the ground of which they form an integral part or are obtained by manufacturing processes having such substances as their raw material. It is hardly necessary to say that the great majority of solid bodies used in the oil and paint trades belong to the former category, and that the majority of these are of vegetable origin.

As a rough rule it may be laid down that an inorganic solid requires for its solution an inorganic solvent and an organic solid an organic solvent. Those inorganic bodies, however, which are insoluble in the greatest of all solvents—water—are usually insoluble altogether as such, solution only taking place at the expense of chemical change. Thus, the only practical solvent for white lead is nitric acid, which in the act of dissolving it changes it from the carbonate of the metal to the nitrate. Organic solids as a general thing dissolve in organic solvents, so far as can be judged as such, for they can usually be recovered in their original condition by removing or destroying the solvent, or by swamping the latter with another liquid in which the solid concerned will not dissolve. Thus the evaporation of a solution of shellac in spirit will give a residue resembling in all respects the original solid. This can also be got as a precipitate by diluting the varnish with water, or by acting on the alcohol with any chemical reagent that will affect it rather than the shellac. The exact condition of the shellac while in solution we do not, however, know, as has been stated, and for industrial purposes it does not much matter what it is.

Broadly speaking, then, from our point of view, we have to regard inorganic bodies from the point of view of their solubility in water. If they are insoluble, or practically so, in that menstruum, there is no more to be said. It has been asserted, and the assertion is quite possibly true, that no substance is absolutely insoluble in water. Still many are so nearly so, barytes, for example, that for commercial purposes the case is the same as if they were strictly indifferent to the solvent action of hydrogen monoxide. If, however, the substance is distinctly soluble in water, the question of the degree of solubility becomes an important factor in the question, and it is found that as a practically invariable rule, the solubility of any one substance in water increases with the temperature. The only common exception to the rule is lime, which is less soluble in hot than in cold water. The solubility of common salt, too, which is about one in four of water, by weight, increases very slowly indeed with rise of temperature, but it does increase. With the vast majority of inorganic substances soluble in water the solubility increases very rapidly with rise of temperature.

The organic solids used in the oil and color trades are almost without exception insoluble in water for all practical purposes.

The reader will now easily gather on what lines the following particulars of the insolubility of substances used in connection with the oil and paint trades will proceed. We begin then with:—

A.—INORGANIC SUBSTANCES.

Insoluble in water, and only dissolving in other liquids, if at all, with decomposition.

White lead.	Whiting.
Litharge.	Magnesite.
Lead sulphate.	China clay.
Lead sulphite.	Vermilion.
Zinc oxide.	Ultramarine.
Zinc sulphide.	Prussian blue.
Mars pigments.	Smalt.
Realgar.	Cobalt blue.
Cadmium yellow.	Copper blues.
Chrome.	Umber.
Copper greens.	Red lead.
Cobalt green.	Iron sesquioxide.
Lamp black and	Antimony sulphide.
Bone blacks.	Lead chromate.
Barytes.	Zinc chromate.
Gypsum.	Ochers.
Strontian white.	Siennas.

B.—INORGANIC SUBSTANCES.

Soluble in water.

In all cases the figures given after the name of the substance denote the number of parts by weight of it which will dissolve in 100 of water, at the temperature indicated.

	Ordinary Temperature.	Boiling.
Borax, dry	2½	5
Borax, crystallized	50	200
Alum, dry	4½	70
Alum, crystallized	9	420
Ammonia, chloride	35	77
Ammonia, carbonate	(in its own weight of water.)	
Ammonia, sulphate	74	103
Arsenious acid	1	10

Arsenious acid is practically insoluble in alcohol or ether. 1,000 parts of castor oil will dissolve 1½ of white arsenic at ordinary temperatures, and 9 at the boiling point of water.

	Ordinary Temperature.	Boiling.
Corrosive sublimate	7	54

Bichloride of mercury dissolves in twice its weight of absolute alcohol. It is barely soluble in ether.

	Ordinary Temperature.	Boiling.
Green vitriol	20	42
	(insoluble in alcohol.)	
Bichromate	10	100
Yellow prussiate	28	90
Red	38	77

Both the prussiates are insoluble in alcohol.

	Ordinary Temperature.	Boiling.
Sulphate of potash	10	20
Carbonate of soda	16	45
Nitrate of soda	87	168
Zinc sulphate, dry	50	95
Zinc sulphate, crystallized	150	653
Nitrate of potash	26	247

Sulphur is the only inorganic substance that requires organic solvents. The most usual of these is bisulphide of carbon, 100 lb. of which will dissolve 37 of sulphur at ordinary temperatures and 180 at 55 deg. C. 100 of benzole will dissolve 1 of sulphur at common temperatures and 4 at 70 deg. C. Brimstone is freely soluble in oil of turpentine, 100 parts by weight of which will, when boiling, dissolve 16 of sulphur. Sulphur is very slightly soluble in alcohol, ether and glycerine.

C.—ORGANIC SUBSTANCES.

It must not be forgotten that some of these are mixtures of different substances, each having its own special solubilities, and that, moreover, these mixtures are by no means of constant composition. This makes the statement of solubilities for the thing as a whole very difficult, but we are giving here what it appears from the best accounts available are the solubilities of average specimens. It will be noted that no figures are given. The reason for this is to be sought for in the remarks just made about the composition of the organic bodies with which we have to deal. The organic bodies used by or in connection with the oil and paint trades may now be considered in the two following classes:

Among the organic solvents for organic solids, alcohol has by far the foremost place. Just as it occupies the place in organic chemistry that water does in inorganic, so it is as a solvent for organic matter what water is for mineral substances. Next to it come at a very respectful distance such solvents as ether, benzole, oil of turpentine, chloroform and oils. The following list gives the chief solubilities of the principal substances connected with the oil and color industry.

GUMS.

Arabic.—Soluble in water very easily, and practically insoluble in everything else. Quite insoluble in alcohol, ether and oils.

Tragacanth.—Partly soluble in water. Insoluble in alcohol.

Beeswax.—Insoluble in water. Soluble in benzole and oils. Partly soluble in alcohol, ether and acetone.

Carmine.—Soluble in water and alcohol. Barely soluble in ether. Soluble unchanged in hydrochloric or sulphuric acid.

Indigo.—Practically insoluble in everything except hot concentrated oil of vitriol. Traces of it dissolve in hot alcohol and oil of turpentine, but separate out again on cooling.

RESINS.

Guiacum.—About 9 per cent. of this resin dissolves in water. It is soluble in alcohol, ether, oil of turpentine and caustic soda, but insoluble in benzole.

Myrrh.—Partly soluble in water, alcohol, ether and caustic soda.

Gamboge.—Soluble in alcohol. More soluble in ether. Soluble in benzole and in caustic soda.

Benjamin.—Soluble in alcohol, but scarcely in ether. Insoluble in benzole. Soluble in caustic soda.

Copal.—Scarcely soluble in alcohol, benzole, or oil of turpentine, insoluble in cold caustic soda. Soluble in ether. The insolubility is much increased by fusion.

Dammar.—Partly soluble in alcohol and ether, barely in caustic soda.

Dragon's Blood.—Soluble in alcohol, ether and oil of trupentine.

Elemi.—Soluble in alcohol.

Ammoniac.—Easily soluble in spirit of ether. Insoluble in caustic soda.

Anime.—Soluble in oil of turpentine. East India anime is said to be insoluble in alcohol, and South American to be soluble.

Gutta Percha.—Insoluble in alcohol or ether. Soluble in chloroform, bisulphide of carbon, benzole, and oil of turpentine.

Shellac.—Soluble in alcohol, borax and caustic soda. Insoluble in benzole or ether.

Mastic.—Mostly soluble in alcohol and benzole. Completely soluble in ether and oil of turpentine.

Peru Balsam.—Soluble in alcohol, partly soluble in ether.

Tolu Balsam.—Easily soluble in caustic soda, alcohol and ether.

Sandarach.—Easily soluble in alcohol, ether and oil of turpentine, in acetone and caustic soda.

Rosin.—Soluble in ether, alcohol, wood spirit, and oil of turpentine.

The resinates of lead and manganese are insoluble in alcohol, slightly soluble in ether, and freely soluble in oil of turpentine.—Oils, Colors and Drysalteries.

Reappraisements of Importations.

24,045.—Colors, from Carl Raspe, Berlin, Oct. 1, 1900. Cadmium yellow No. 10 and No. 28, ent. at 11 marks per kilo. No advance. Discount, 2 per cent. Add packing.

24,011.—Rough trimmed mica, from J. Louis & Co., Gaya, July 19, 1900. No. 1,005, crystal ruby mica and white mica, ent. at 3½d., adv. to 4½d. per pound. Deduct freight to New York, consul fee, brokerage and stamping.

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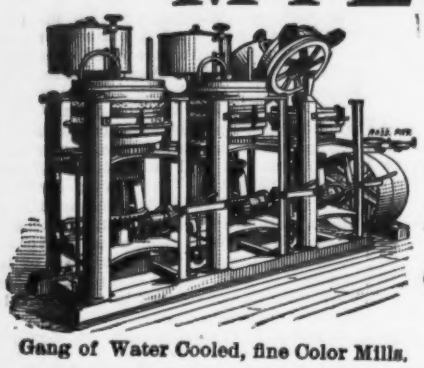

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GRINDERS OF
Turkey Umbers, Italian Seinnas, Bone and Ivory Black.

PAINT MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 39.

Saturday Evening, Nov. 10, 1900.

As might have been expected in such a broken week, the market was quiet, but not exceptionally so. Conditions, however, were left in very much the same state all around, and there are no more changes in the general price list to report. White lead and lead pigments generally have been in moderately good request, and the same may also apply to dry colors, mixed paints and colors in oil. The advance in the latter two does not seem to have affected trade materially. Earths and clays are moving fairly well, but varnish gums are quiet, so far as new future business is concerned, though from inquiries received there are good orders ahead. Glass continues somewhat depressed, with conditions unchanged.

White Lead, Zinc, Etc.

WHITE LEAD.—Considering the unsettled condition of the linseed oil market, trade in the various lead products has picked up very materially since the election is over. Weather conditions, however, may have had a good deal of an influence upon trade, as it has been favorable to outdoor work. Grinders and other color makers are all interested in the meeting to be held on the 13th in this city, having for its chief object the possible advance in the prices of their products to cover the enhanced cost of linseed oil and other raw materials. Already many of the leading makers have raised prices, as stated in a previous issue. Reports from the West are all of a rosy nature as far as the outlook is for an active spring trade. Dry lead is selling freely in addition to regular contract deliveries, which are being drawn upon freely by grinders and other consumers of this oxide. No trouble is experienced in obtaining the advance which was recently made by the corroders upon all new orders, though the bulk of the deliveries are the finishing up of old contracts made earlier in the season. There is no intimation on the part of corroders that prices may be advanced in the near future, as the metal has been fairly steady, though now and then a slight weakness is shown on the part of Western speculators to unload their surplus stocks. Foreign makes of lead in oil, as usual at this period of the year, are quiet, but prices remain unchanged at 9⅝@9⅝c. for the old established brands, and for those not so well known 7¾@8c., as to make and quantity. The various corroders continue their previous price list as follows:—

"We quote, subject to change without notice, above brands of white lead, dry or in oil, red lead and litharge in kegs: In lots of less than 500 lbs., 7c. net; in lots of 500 lbs. and over, 6½c.; dry white lead in bbls., ½c. per lb. less than price in kegs. Red lead and litharge in bbls. and half bbls. same as price in kegs. White lead, in 12½-lb. tin pails (packed in 100-lb. cases), 1c. per lb. over price in kegs; white lead in 25-lb. tin pails (packed in 100-lb. or 200-lb. cases), ½c. per lb. over price in kegs; white lead, assorted in 1-lb., 2-lb. and 5-lb. cans (packed in 100-lb. cases), 1½c. per lb. over price in kegs. Terms—On lots of 500 lbs. and over, 60 days or 2 per cent. discount for cash if paid in 15 days from date of invoice. Quantities—To make either of above required quantities, any assortment of packages of either, or all of the above articles may be counted."

RED LEAD.—The bulk of the business passing at the moment is deliveries upon existing contracts, which are sufficient to keep stock of domestic low in corroders' hands. There is, in addition to these deliveries, a good jobbing demand, which is satisfied at current prices, less the usual discount terms. German is rather quiet, as buyers are still holding off, waiting for lower prices, which agents are not inclined to name at present. Only a small retail demand is reported for spot goods at 7¾@7⅞c., as to make and sellers. English, though quiet, is held steady at 7⅝c. and upward, as to make, quantity and seller.

LITHARGE. — Since the month opened the deliveries to the glass and rubber makers show a further increase over the previous month. Stocks of domestic continue low in this section, and same conditions prevail in the West, though competition is rather more sharp in that locality, and more or less complaint is heard about the irregularity of prices, though it is claimed that card prices are followed closely, less the usual discount terms.

ORANGE MINERAL.—Though trade has been rather quiet, French remains steady at 11½c. for arrival, and 11⅝c. for spot parcels, for which the usual seasonable demand prevails. German, for the moment, is held above buyers' views, especially for arrival. There is, however, a fair jobbing demand for spot goods at 8¾@8⅞c., according to grade and quantity. English is without special feature, trade being quiet. Prices are held steady at 8½@8¾c. for the lower grades, and at 9⅞@10¼c. for the extra grades, as to quantity and seller. Domestic is in good request, both for prompt and forward, at 8@8¼c., as to grade, less the usual discount terms.

PIG LEAD.—Trading has been rather quiet both here and at the West, and prices may be quoted steady at 4.37½c. for common and 4.52½c. for refined. The St. Louis market is steady with 4.20@4.22½c. bid, according to grade, but holders are asking about 4.25@4.27½c.

ZINCS.—Under an improved demand from grinders in all sections, for contract deliveries, the market has been unusually active, especially since the election is over. Nothing definite is known about prices for 1901, as they will not be announced before next month. Meanwhile the New Jersey Company continue their quotations of 4¼@4¾c., according to grade. There is a good export demand, which prevents any accumulation of stocks. Florence is selling freely for prompt and next month's delivery at 7¼@7¾c. for red, and 7¾@8¼c. for green seal, as to quantity. German and French are both quiet, but steady, with more inquiry for the latter for prompt delivery.

Dry Colors.

RED.

The week was uneventful for all grades, and in keeping with the general state of the trade during election week, comparatively little interest was shown. There was a little inquiry from the West for vermilions and venetian reds and conditions for future business appear promising. The former is moving locally in a small jobbing way, demand being for the most part confined to ordinary domestic qualities. Quicksilver, Chinese and English vermilions are quieter at quotations. Venetian and Indian reds move moderately at old current figures.

BLACKS.

CARBON.—The features of the market have varied but slightly, if at all. There is still the same difficulty in procuring sufficient gas to meet market requirements, making carbon black comparatively scarce and firm at old quotations.

DROP AND IVORY BLACK.—There was but little inquiry for either drop or ivory black. Business was of a most ordinary sort and confined to small jobbing lots to fill odd shortages. Prices continue unchanged.

LAMPBLACK.—While there was less inquiry from the West and other outside points during the week, the season's business so far has been entirely satisfactory both in the domestic market and on export account, notwithstanding that high prevailing ocean rates have somewhat hampered the latter. The market is generally firm upon the basis of former quotations.

BLUES.

As with all dry colors, the market during the past week was exceptionally quiet. Celestial and some of the other cheaper grades were asked for in small quantities to meet sundry requirements in the local market, but there was but little shipped to outside points. Chinese and Prussian have attracted somewhat more attention, but mostly for future shipment. Ultramarine has been moving with considerable freedom and manufacturers have had some difficulty in keeping up to orders. Prices are low, but without change.

BROWNS.

The general depression consequent to the high cost of linseed oil has been particularly felt in the umber and sien-

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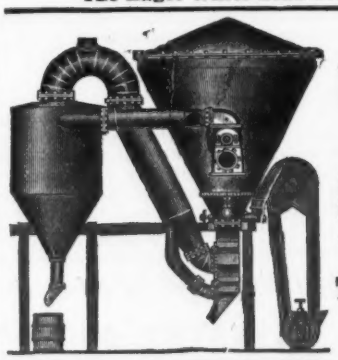

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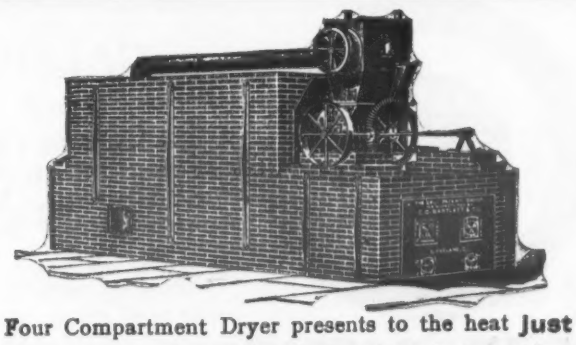

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na market. These colors, both domestic and foreign, have been taken freely upon contract, but, as grinders have not been manufacturing to any extent beyond actual requirements, stocks are somewhat heavy on their hands and inquiry for new goods correspondingly light. Prices are as previously quoted.

GREENS.

The week was uneventful, but, considering the break caused by the election, there was a fair amount of business done, more especially for chromes, stocks of which do not appear to have accumulated to any great extent in the hands of the grinders. No contracts embodying any great quantities, however, could be traced. Prices are steady at about the same range of value.

YELLOWS.

CHROME.—There was a falling off last week in comparison with previous sales, but on the whole conditions were satisfactory in view of the disturbance to trade in general. The market continues to show the same steady tone and prices are inclined to be firm, though unchanged from the basis of former quotations.

OCHER.—Receipts of foreign ochers have been light, and business, both in foreign and domestic, more than usually quiet. Contract deliveries are now well up, and comparatively little now remains to send forward. Grinders are therefore pretty well supplied, and with oil at its present cost demand for fresh goods, especially for future delivery, has fallen off, and the market is generally quiet and confined to small jobbing parcels to meet current requirements.

Metallic Paints.

Metallic oxides have been particularly quiet of late, and no doubt have suffered, with so many other lines, from the high cost of linseed oil, as well as from a general falling off in many consuming industries. The quiet was particularly felt at Western and other outside points, but the local market has of late been nothing to boast of. Inquiries, however, which have not yet led to business point to improvement later on. Export trade has not been materially retarded by high ruling ocean freights, and so far has been exceptionally good for well known brands.

Mixed Paints.

Demand was moderate during the week and apparently but little affected by the change of prices, though there was a certain unsteadiness, due to uncertainty on the part of many manufacturers, pending the meeting of the National Paint Grinders' Association on Tuesday next, when many things of interest and importance to the trade will be discussed. Standard grades are all firm at the advance, and unless previously contracted for will hold steady if they do not advance still further.

Colors in Oil.

Conditions are unchanged since the advance. The market, while quiet during the week has so far been good for the season. Manufacturers seem confident that an improvement is imminent, and that prices will be well maintained.

Miscellaneous.

BARYTES.—There is no further change to report beyond the gradual completion of fall contracts and a consequent quieter condition of the market. Prices are as previously quoted.

CHALK.—The larger consumers have now ample supplies on hand, and as demand is consequently lighter than for some time the market is easier, though without quotable change from former figures of 2.60@2.70.

CHINA CLAY.—Demand, while not dull, was quieter than for some time heretofore. The market, continues as firm as ever owing to the exceptionally light stocks and the high cost of ocean freight. As yet importers have not made any advance, and prices are as previously quoted.

FULLER'S EARTH.—The market remains quiet and comparatively little interest is shown. Spot supplies are light, and holders are therefore unwilling to make concessions for the little business offering. Prices, however, are without quotable change.

PUTTY.—Contracts have been now well taken up and no new business is yet reported. Consuming industries have been unusually quiet and stocks therefore with both dealers and consumers are rather heavy. Prices remain as previously quoted.

TALC.—Italian talc remains as scarce as ever, and as there has been a fair demand the market, both for domestic and foreign, is proportionately firm, though without quotable change.

TERRA ALBA.—The market has been quiet during the week, but on the whole moderate activity has prevailed up to the present. There has been no material change in price.

WHITING.—Heavy shipments consequent to a rush to get balance of contracts off before the close of navigation are now declining, and the market is proportionately easier so far as the volume of business is concerned. As yet no new contracts have been made and prices remain as previously quoted: Commercial, 42@52c.; gilders', 56@58c.; American paris, 66@76c., and English cliffstone, 75c.@$1.20.

Varnish Gums.

The market for all grades of gum showed comparatively little life all week. There was the usual demand for small jobbing lots but, apart from this no business of any consequence was reported. Inquiries, however, are beginning to come in and indicate an early beginning for next season's trade. No important news comes from Auckland, and conditions there remain as previously reported. From all indications there is little chance of an easier tone in that market, and the tendency all along has been that of a hardening of values. The advances have been so gradual as to make trifling impression upon the market, and have generally resulted in a different assortment of grades to even up. Manila has been in quiet request for some time, and demand has been almost altogether confined to nubs and chips. The market, however, shows no signs of weakening. Damar, in which more than usual interest has been shown this season, is entirely unchanged, both at Batavia and in the local market.

Window Glass.

The window glass situation is without change from our previous report. The troubles between manufacturers

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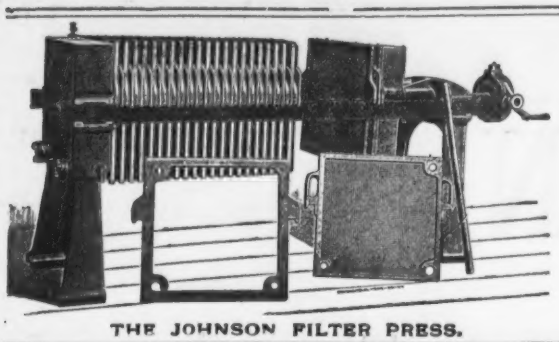

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and workers are attracting less interest, as it becomes more and more apparent that the difficulties of the former with their new hands are subsiding and new glass comes into the market in greater quantities. Jobbers still complain, however, that they cannot get their assortments necessary to fill old orders, but this trouble is gradually becoming less. The local window glass market is quiet, and it is quite probable that the manufacturers will not be pressed for any heavy supply for some little time ahead. Conditions in Belgium, so far as could be learned, are unimproved and foreign glass is becoming scarcer, though as yet importers have made no change in recent quotations. It looks, however, as if higher prices might prevail.

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Tweddle obtained a very small proportion of a solid green hydrocarbon ("petrocene") from distillation residues, and a sample was exhibited at the Philadelphia Exhibition in 1876. Other products obtained by this worker were designated by him carbocene, carbopetrocene, thalene, etc., of which thalene is a sublimation product of petroleum and melts at 210 deg. C. The other melting points range between 190 deg. and 240 deg. C., the bodies are soluble, down to a small residue, in concentrated sulphuric acid, and combine energetically with bromine, hydrogen bromide being liberated.

Numerous other workers have interested themselves with these products, and recently Klaudy and Fink published researches on a new aromatic hydrocarbon C24H18) from petroleum, the crude material employed being the red pitchy substance collecting in the neck of the cracking still toward the close of distillation. The product ("crackene") obtained by extraction with petroleum ether, etc., forms yellow scales with green fluorescence, melting at 308 deg. C. and boiling, with decomposition, at about 500 deg. C. Pure crackene is dissolved by concentrated sulphuric acid, with formation of sulpho-acids, the solution being deep blue if pure, but otherwise green. Bromine gives a di-substitution product, chromic acid and glacial acetic acid furnish a quinone, and nitric acid a di or tetra-nitro product which can be de-nitrated to a phenol by alkalis.

Sadtler and Carter also state that petroleum residuum furnishes on distillation a yellow wax containing higher pyrogenic hydrocarbons, anthracene, chrysene, picene, phenanthrene and pyrene.

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*A paper read at the Petroleum Congress, Paris Exposition, from Petroleum Revue.

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leum resin (about 0.04 per cent. of the crude oil). This product is sticky, of disagreeable odor, and darkens on exposure to the air, its appearance recalling that of the "green grease" in anthracene manufacture. It hardens on prolonged exposure, without becoming brittle, this property being also observed by Klaudy and Fink in their red pitch. When repeatedly washed with benzine and treated in a filter press it furnishes yellow-green cakes, resembling the so-called "petrocene," and may be obtained in a purer form, of pale yellow color, by dissolving the crude resin in 10 vols. of benzine, precipitating with 5 vols. of absolute alcohol, and washing with benzine and alcohol (2:1).

When heated the resin evolves heavy vapors and a smell of burning caoutchouc, fine thin flakes with beautiful blue fluorescence being sublimed when the operation is carefully performed. These flakes soon turn brown unless purified by repeated recrystallization from benzol. When the pressed resin is distilled dry, water is liberated, followed by vapors condensing to a yellow sublimate, then by a little brown distillate, and finally by other vapors, which solidify to a yellow mass, a green melt being left as residue. The distillate has a smell of pyridine bases and gives a yellow-brown precipitate with Nessler's reagent. Dilute sulphuric acid extracts from the resin certain basic substances, the reaction being accompanied by the formation of hydrogen sulphide from the decomposition of the small proportion of iron sulphide present. Extraction of the resin with warm concentrated nitric acid, followed by dilution with water, yields a reddish resin and a yellow amorphous powder; and an excess of concentrated sulphuric acid, aided by heat, gives an acid tar and sulphurous acid, the former dissolving to a greenish-black solution in water. Treated with lime it gives a brown liquid of characteristic smell and a brown deposit containing insoluble lime sulpho-salts.

The resin gave 0.5 per cent. of sulphur under the Eschka-Fresenius method, and its behavior towards solvents revealed the presence of paraffin, various high-boiling hydrocarbons, basic substances, phenols and iron sulphide.

The purified resin (or crude petrocene), is partly soluble in alcohol, benzine, acetone, ether, acetic ether and glacial acetic acid; and entirely so in warm carbon-bisulphide, chloroform or benzol, the latter being the best solvent. From this solution, petrocene crystallizes on cooling, as golden yellow flakes with a strong green fluorescence. The crystals shrivel up at below 200 deg., but do not melt entirely at 250 deg. C., whereas the sublimed substance melts at about 225 deg. C. The crude substance is heavier than water. The percentage composition is C=94.2, H=5.6 per cent. on the average.

The product corresponds to the substance examined by previous workers, but instead of being a simple body, is a complex mixture of hydrocarbons and rich in paraffins. After removing the latter by extraction with benzine, the petrocene was separated by various solvents into the following fractions:—

Extraction.	1. Crystallization. °C.	2. Crystallization. °C.
Benzine 1	213	187-188
Benzine 2	232	193-196
Benzine 3	230-238	206-213
Benzine 4	240-247	212-217
Alcohol 1	240-245	206-207
Alcohol 2	225-230	203-206
Carbon bi-sulphide	295	250-257
Benzol	325 Softened, not melted even at 330°C.	310-312

Extraction.	3. Melting Point. °C.	4. Melting Point. °C.
Benzine 1	145-152	—
Benzine 2	160-165	—
Benzine 3	175-177	—
Benzine 4	170-175	—
Alcohol 1	Very little.	—
Alcohol 2	Very little.	—
Carbon bi-sulphide	242-248	190-192
Benzol	280-290	250

The method adopted in the main researches was a modified form of Prunier's, by fractional solution and crystallization from different solvents, special attention being directed to the condensed benzol ring hydrocarbons, anthracene, phenanthrene, pyrene, chrysene, etc. Finally, after numerous recrystallizations the following fractions of fairly constant melting point were obtained:—

No.	Melting point. °C.	Description.
1.	250.5	White, large flakes of silken lustre.
2.	228	Pale yellow crystalline powder.
3.	221.5	Scales of pale canary-yellow color.
4.	206	Large, white nacreous flakes with greenish shimmer.
5.	191.5	Large, white nacreous flakes with green fluorescence.
6.	168	Large silvery flakes.
7.	155.5	Silvery flakes.
8.	163	Pale yellow flakes, with faint greenish tinge.
9.	147	Light gray silvery scales.
10.	140	Gray nacreous scales.

The solubility increases inversely as the position in the above list.

Three other products were also obtained, soluble in alcohol, but only sparingly so in benzene:—

No.	M. P. C.	
11	216	Grayish white powder.
12	230	Grayish white powder.
13	245-247	White granular powder.

On ultimate analysis the following composition was found:—

No.	C.	H.	O.	No.	C.	H.	O.
1.	94.4	5.6	—	8.	93.0	7.2	—
2.	94.8	5.2	—	9.	93.2	6.9	—
3.	94.3	6.0	—	10.	92.85	7.35	—
4.	92.8	7.0	—	11.	88.75	6.80	4.37
5.	93.2	6.5	—	12.	92.40	7.00	—
6.	93.4	6.7	—	13.	91.80	7.30	—
7.	93.3	6.8	—				

Corresponding closely — especially Nos. 1 and 10—to the formula $(C3H2)n$ or $(C3H3)n$; the quantities available were, however, too small to investigate this more closely, except in the case of No. 1. The results obtained by the examination of this fraction corresponded closely with the formula $C15H10$, and No. 3 to $C16H12$, but the divergent characteristics of the new products, as compared with the known members of the series, speak in favor of their isomerism; and the products separated from crude petrocene by means of alcohol must be regarded as hydrocarbons of a new series, the absence of quinones in the oxidation tests rendering it doubtful whether they belong to the general type of aromatic hydrocarbons at all. It is therefore proposed to bestow the generic name of petrocenes on these compounds.

The preliminary examination seems to indicate $CnH2n—20$ as the general formula of these solid, high-boiling hydrocarbons formed in the coking of the final distillation products of petroleum and contained in the red pitch or resulting crude petrocene. They are soluble in concentrated sulphuric acid, furnish no quinone, are completely consumed by chromic acid, are not oxidized to aromatic carbo-acids, form picrates only in chloroform solution, and are readily hydrogenized; of their constitution nothing can be said at present.

With all reserve the possibility may be mentioned that lacking the probability of these petrocenes being attributable to the aromatic class, especially the benzene ring system, so largely represented in coal tar products, the petrocenes may be explained constitutionally in a manner similar to the other ring systems known under the names of poly-methylenes or naphthenes. It is sufficient to mention now that, as will be readily understood, the pentamethylenes or tetramethylenes can, after partial dehydration, be readily brought into combinations corresponding to the formulae of the substances under consideration.

In conclusion, attention may be drawn to the circumstance that while some workers have found solid aromatic hydrocarbons in crude petrocene, others, including the author and Gans, have failed to do so. On this point it is advisable to consider the results obtained by superheating petroleum. Various experiments have shown that under normal circumstances no formation of such aromatic products (anthracene specially) occurs when petroleum residues are superheated; this is fully confirmed by the labors of Letny, Liebermann and Burg.

Letny, who isolated naphthalene, anthracene, and phenanthrene from Russian gas tar (from petroleum residue and wood), succeeded in obtaining benzene and its homologues, but no anthracene or naphthalene, by passing petroleum residues through red-hot tubes filled with coal coke, platinised carbon, bricks and asbestos, a yellow paraffin-like mass of petrocene being produced at the close of the distillation. Letny ascribes this to the influence of the mass of carbon "the proportion of solid hydrocarbons in the tar increasing with the superficial area of the hot retort." Leibermann and Burg, in a comparative research on the behavior of lignite tar and petroleum when overheated, state that lignite tar yields 0.9 per cent. of crude anthracene, but petroleum gives little or none, though furnishing considerable proportions of benzine.

Of these pyrogenic reactions Atterberg says that the yield of aromatic products depends partly on the percentage of hydrogen in the substances employed, partly on the duration of the superheating and in part on the temperature. This agrees with the author's experience that petroleum residue, or heavy oils, when passed through pipes heated to redness, will furnish benzene, toluene, etc., but not naphthalene or anthracene, these latter requiring the temperature of pale red heat or incipient white heat for the production.

Interesting information on this point was furnished by Charitschkoff in describing the fate of an anthracene works established at Kir Maku (near Baku) in the "eighties" for working up a special heavy petroleum. Instead of the anticipated 3.5 per cent. of anthracene, the superheated oil yielded only 0.30 per cent. of a crude product which could not be purified, and presumably was not anthracene at all—a circumstance that quickly sealed the fate of the enterprise.

On comparing these facts and observations, one is convinced that the formation of solid aromatic hydrocarbons by superheating petroleum residues is possible only under exceptionally favorable circumstances—high temperature, prolonged heating and special tendency on the part of the oil—and that, normally, the pyrogenic reactions run on other lines. Especially in the cracking process are the conditions scarcely favorable, the degree of superheating and the superficial area of decomposition being less than experience shows to be necessary therefor. Under these conditions, viz., temperature not exceeding red heat, the heavy hydrocarbon vapors deposit carbon as coke and ash and undergo condensation to the solid hydrocarbons now termed petrocene. A knowledge of the constitution of the latter would be of great importance for the elucidation of these pyrogenic reactions, and, at the same time, would form a touchstone for the theory that petrocene is a condensed naphthene. Supplementary to these considerations is the assumption that light red to white heat is necessary for the production of solid aromatic hydrocarbons, a circumstance to which the presence of ordinary coal tar is due, and which does not preclude the possibility that occasionally the same bodies may be found in the products from the superheating of petroleum.

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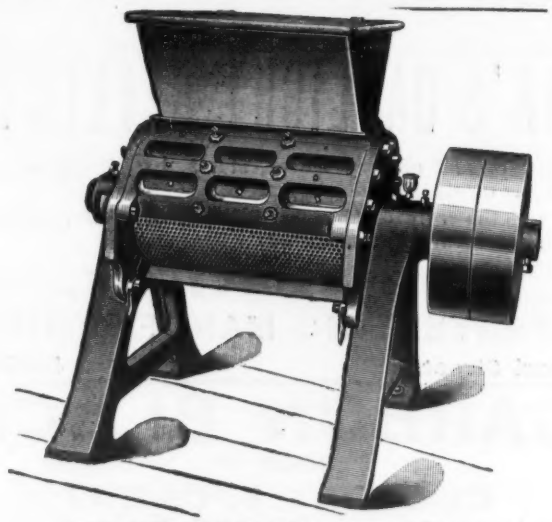

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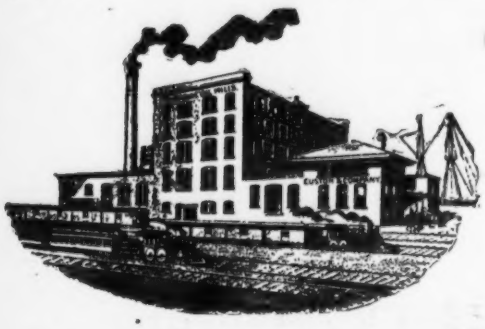

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Saturday Evening, Nov. 10, 1900.

Vegetable Oils.

LINSEED.—Since the excitement of election is over a large business has been done in January to May deliveries at 66@67c., and for December alone at 68c. There have been sales in the West of 600 bbls. for prompt delivery at 68c., which is equal to about 70½c. delivered here. There were also a few single car lots of State oil for November at 70c., though at the close 71c. was generally asked. City oil is selling fairly well at 75c. for raw and 77c. for boiled. Calcutta is without change and selling in a jobbing way at 85c. Our Chicago letter gives the seed and oil situation more in detail.

COTTONSEED.—While all the other kindred markets, and especially the stock market, have felt the effects of the election boom, cotton oil so far has not shown any marked degree of activity. The situation is a peculiar one: If a buyer comes into the market for a round lot of oil for prompt delivery he would probably have to pay 33½@34c., while on the other hand to sell a round lot it is doubtful if better than 32c. or 32½c. could be obtained. In fact sales were made early in the week of prime yellow for prompt at 32¼c., and for December-January at 32½c. Later, however, sales were made at 33c. for January-May and for November at 33@33½c. The advance by packers of all grades of meats may have a temporary effect to strengthen cotton oil, but as long as the foreign markets, as our cables show, continue as they are, from 1@1½c. below this market, no permanent effect may be expected. Foreign advices to hand intimate that while it is possible that the soapmakers may buy cotton oil for December-February shipment, none of them will contract for supplies beyond April, as reports are that the receipts of other nut oils into France from April forward, from India and Africa will be unusually large, and that soapmakers will thus be able to buy these oils at much better figures than those asked for cotton oil. As we said above, the "boom" which is now so apparent may affect cotton oil, and it would only be natural that it should, and we may now have seen the bottom of cotton oil prices. While there are those who feel this way and point to the firm tone of the tallow and grease markets. It must not be lost sight of—the fact that those packers who have raised the price of their meats also control the hog and lard markets, which they are now depressing for all they are worth. Another fact confronts the trade, and that is the cotton crop will be as large, if not larger, than last season, the bulk of which has been picked, so that the seed supply will be ample, and thus prevent any scarcity of oil. These are the general sentiments of the trade. It is rather amusing to see the efforts of the seed speculators who have high-priced seed on hand attempt, through the daily press, to boom prices for same by reprinting what we have given to the trade for the past ten years regarding this industry so little understood by the general public. The foreign markets of late have been flooded with offers of oil from 1c. to 2c. below this market, which in many cases have been accepted for November to February shipment from Southern ports by those sellers who have been fortunate enough to have secured cheap ocean freights. To-day the market was a shade firmer for prime summer yellow, with 33½c. bid and 34c. asked for November and December. The crude market is also a shade better, sales having been made in the Atlantic at 25@25½c., Valley at 25@25½c., Memphis at 26c. and Texas at 24½@25c. The receipts of new crude at this port are rather more plentiful, and sell around 28@29c., according to quality. There is more inquiry for winter yellow, and sales have been made at 37@38c., and for white oil for export at 34c., though at the close a shade higher was asked. The sales are mostly for prompt or for delivery up to February, though a few have been made for May. They comprise 2,500 bbls. prime yellow January-May at 33c., 1,400 bbls. do. on the spot at 32¼@32½c., 250 bbls. do. for December at 33c., 250 bbls. off yellow spot at 32c., 1,000 bbls. prime yellow spot at 33c., 1,000 do. for December-January at 32½c., 3,000 bbls. prime yellow for November-January at 32c. f. o. b. New Orleans, 4,000 bbls. off yellow do. at 31c. f. o. b. New Orleans, 2,000 bbls. prime yellow spot at 33c., 2,500 bbls. do. November-December at 33½c., 1,100 bbls. white oil for December-February at 34., 750 bbls. winter yellow at 37c., 400 bbls. do. for prompt at 39c., 250 bbls. crude on the spot at 28@29c., 20 tanks Atlantic and Valley crude at 25c., 45 tanks Valley at 25½c., 20 tanks Memphis at 26c. and 10 tanks Atlantic at 25@25½c.

EXPORTS OF COTTONSEED OIL FROM NEW YORK, BY COUNTRIES

	For week ending Nov. 8, 1900.	Since Sept. 1, 1900.	Same time last year.
Africa, Algiers	....	.....	100
Egypt	150	200	1,087
South	22	87	35
West Coast	....	.....	305
Argentine Republic.	....	516	324
Australia and N. Z.	117	827	373
Austria	1,398	8,470	6,065
Belgium	150	160	1,123
Brazil	100	3,852	1,980
British East Indies.	....	1	.....
British Guiana	48	493	221
British West Indies.	85	838	1,000
Central America	10	46	45
Chili	6	12	106
Cuba	....	66	139
Danish West Indies.	....	13	6
Denmark	200	650	672
Dutch West Indies..	....	.....	10
Ecuador	....	3	10
England	1,492	10,043	8,541
France	1,000	6,975	20,708
French Guiana	....	71	2
French West Indies.	300	2,036	1,247
Germany	505	3,959	3,646
Gibraltar	....	200	.....
Italy	1,000	7,796	7,090
Japan	....	2	20
Malta	560	764	.....
Mexico	....	54	59
Morocco	....	75	.....
Netherlands	50	12,095	6,757
Norway and Sweden	....	275	108
Newfoundland	....	200	100
Porto Rico	....	7	2
San Domingo	135	398	173
Scotland	100	1,770	2,411
Spain	....	.....	300
U. S. Colombia	6	115	59
Uruguay	....	648	619
Venezuela	....	8	.....
Total, bbls.	7,434	63,889	60,733

EXPORTS OF COTTONSEED OIL FROM NEW ORLEANS, BY COUNTRIES.

	For week ending Nov. 8, 1900.	Since Sept. 1, 1900.	Same time last year.
Austria	....	1,423	605

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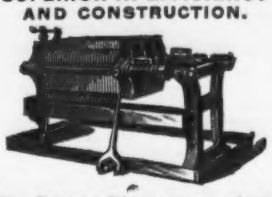

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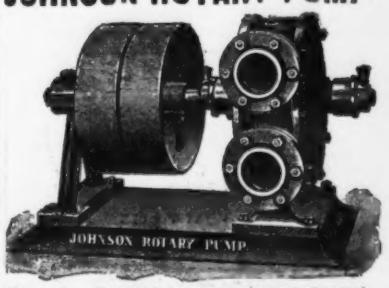

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Cuba	....	.....	125
Denmark	....	300	350
England	....	4,184	500
France	10,400	10,400	5,925
Germany	....	.....	100
Netherlands	....	.....	3,355
Total, bbls	10,400	16,307	11,259

EXPORTS OF COTTONSEED OIL FROM BALTIMORE, BY COUNTRIES.

	For week ending Nov. 8, 1900.	Since Sept. 1, 1900.	Same time last year.
Belgium	....	250	.....
Brazil	....	.....	75
England	....	1,600	.....
France	....	256	.....
Germany	1,470	1,730	1,278
Netherlands	....	10,025	.....
Scotland	....	65	100
Total, bbls	1,470	13,926	1,453

EXPORTS OF COTTONSEED OIL FROM GALVESTON, BY COUNTRIES.

	For week ending Nov. 8, 1900.	Since Sept. 1, 1900.	Same time last year.
Austria	....	.....	136
Belgium	....	.....	1,428
Denmark	....	.....	1,290
France	....	.....	12,374
Germany	....	.....	602
Mexico	....	2,593	2,583
Netherlands	....	3,370	5,443
Total, bbls	....	5,963	23,856

TOTAL EXPORTS AT PRINCIPAL PORTS.

From—	For week ending Nov. 8, 1900.	Since Sept. 1, 1900.	Same time last year.
New York	7,434	63,889	60,733
New Orleans	10,400	16,307	11,259
Baltimore	1,470	13,926	1,453
Galveston	....	5,963	23,856
Total, bbls	19,304	100,085	97,301

MONTHLY EXPORTS, BY PORTS.

The following are the official returns of the exports of cottonseed oil, in gallons, during the month of August, 1900 and 1899, furnished by the Bureau of Statistics, Washington:

	1900.	1899.
Baltimore	328,700	122,312
Boston	18,273	1,266
Brazos de Santiago	5,265	.....
Corpus Christi	10,270	34,600
Detroit	20,973	.....
Galveston	104,000	371,859
Huron	3,072	11,792
Mobile	.....	3,411
New Orleans	696,583	441,340
Newport News	190,320	59,800
New York	1,370,758	1,582,200
North and South Dakota	11	.....
Norfolk and P	290,500	254,844
Oswegatchie	1,410	.....
Saluria	110,598	193,786
Savannah	.....	13,000
Vermont	3,471	16,569
Total, gallons	3,154,303	3,106,770

TOTAL MONTHLY STATEMENT.

	1897.	1898.	1899.	1900.
Jan.	2,891,213	4,787,702	8,289,487	7,100,740
Feb.	3,447,686	4,151,707	5,427,822	4,185,033
March.	3,538,570	3,043,909	4,946,440	4,133,683
April.	2,204,802	3,729,172	3,482,987	3,056,562
May	2,721,710	3,538,136	2,408,458	3,012,760
June	1,433,366	4,019,025	2,541,592	2,641,008
July	1,770,599	1,255,156	2,577,454	1,289,595
Aug	1,913,958	2,127,609	3,166,770	3,154,303
Sept	1,876,143	2,778,153	2,276,515	.....
Oct	3,953,395	4,055,295	3,915,809	.....
Nov.	2,633,317	6,446,572	3,926,035	.....
Dec.	5,704,661	6,798,718	6,538,519	.....
Total.	33,181,491	46,710,214	49,537,888	.....
Av'ge	2,765,124	3,892,518	4,128,151	3,571,710

(Special Cablegram to the Reporter.)

Liverpool Cotton Oil Market.

Liverpool, Nov. 9, 1900.

Cottonseed oil, £21 10s.; cake, £6; meal, £5 18s. 9d.; seed, £6 12s. 6d.

(Special Cablegram to the Reporter.)

Marseilles Cotton Oil Market.

Marseilles, Nov. 9, 1900.

Prime summer yellow for immediate delivery, 63 francs; end of November, 59 francs; November shipment, 57 francs; December-January shipments, 55 francs per 100 kilos, c. i. f. Marseilles. The market is decidedly weaker, and the tendency is downward.

(Special Cablegram to the Reporter.)

Rotterdam Cotton Oil Market.

Rotterdam, Nov. 9, 1900.

Butter oil, 29 florins; prime summer yellow, 27 florins per 100 kilos c. i. f. Rotterdam. Buyers are coming forward freely. Meal cake is quoted at 72 guilders. The market is decidedly weaker, and the tendency is downward.

(Special Telegram to the Reporter.)

Kansas City Cotton Oil Market.

Kansas City, Nov. 10, 1900.

Cotton oil firm but quiet, 24½c. for prime crude in Texas and territories, with most mills sold up for this month, and 25c. generally asked for late deliveries. Valley mills asking 26c. with apparently considerable to be marketed from that section. Considerable off crude to be had at a discount of 2 to 3c. under prime crude. The market for refined continues stagnant with prices ruling under current value of crude; small sales basis 27c. Texas. Tallow advanced sharply on stimulation Eastern and foreign advices round, sales prime packers basis 4⅞@5c., according brand. Supplies again cleaned up for some time to come, and ⅛ to ¼ more demanded for future, with few sellers at any price. Off grades somewhat higher, 4½ to ⅝, as in quality. Greases scarce; sales fair. White, 4⅝c.; yellow, 3⅞c.

(Special Telegram to the Reporter.)

Dallas Cotton Oil Market.

Dallas, Nov. 10, 1900.

Oil market extremely quiet this week, with 24½c. bid; only few tanks sold at that and 25c., buyers holding off, mills waiting.

(Special Telegram to the Reporter.)

New Orleans Cotton Oil Market.

New Orleans, Nov. 10, 1900.

Cake and meal, 24c.; market active. Valley crude, 25@25½c.; Texas, 24½c. Market dull. Off yellow, 30c.; prime yellow, 31c. No demand.

(Special Telegram to the Reporter.)

Louisville Cotton Oil Market.

Louisville, Nov. 10, 1900.

Market quiet, with bids at 25½c. Memphis, and 25c. Mississippi Valley. Sales reported on basis of 25¾c. Memphis, for prompt prime crude. Summer yellow offered at 30c. loose Chicago, with no takers.

(Special Correspondence to the Reporter.)

Dallas Cotton Oil Market.

Dallas, Nov. 6, 1900.

Very little trading in the oil market this week, though fair inquiry with 24c. to 24½c. bid, and some few small sales at 24½c. The mills being well sold ahead are anticipating higher prices. Meal and cake markets active for past several days with $21 to $21.25 paid f. o. b. Galveston. Linters remain inactive with few buyers; buyers and sellers' views as to values wide apart; some sales at 3½c., and possibly a little better could be had for good clean quality. Seed, $11 to $12 f. o. b. stations. Weather, with the exception of some rains, continues favorable for gathering and marketing the crop.

Cocoanut Oils, Etc.

CEYLON.—Early in the week about all the cheap lots on the spot were taken up, about 30 tons, at 5⅞c., and at the close 6c. was asked, with 5⅞c. bid. Also 50 tons from steamer due at 5¾c. The steamer just arrived brings no oil. Shipments for December-January are held at 5⅝c., with 5.60c. bid.

COCHIN.—What little stock there is on the spot is held at 6½c., at which a fair jobbing trade is being done. From steamer now due 6½c. is asked for what little stock there is unsold. Shipments are quoted at 6¼c.

CORN.—No change in the situation, which remains a strong one, with car lots held at 7c. for prompt and December delivery. Store parcels are held at 7⅜@7½c., according to seller and quantity. Buyers are not inclined to anticipate their future wants, so it is hard to say what could be done for January forward.

OLIVE.—There have been further sales of spot yellow at 58c., and for arrival at 57c., about 150 bbls. within the range. Shipments of new crop are quoted at 55@56c., but this is above buyers' views. Choice green oil is held at 61@62c. Olive foots are dull at 6c. for spot and 5¾c. for arrival. Shipments of new crop are quoted at 5¼@5⅜c., as to quality and seller.

RAPE.—There is a good jobbing demand for spot lots of a choice burning grade at 75c., and for arrival at 70c. Only a small retail demand is reported for the ordinary grade at 68@69c.

Animal and Fish Oils.

COD.—Demand for cod oil has become steadier and there is little supply to fill it from. Newfoundland oil is very sparingly offered, but so far has not been advanced in price, though the market could hardly be firmer, and a change to higher figures might occur at any time. The import price is given at 36@37c.

DEGRAS.—The cheaper grades are still in short supply and difficult to obtain at a reasonable price. Demand is moderate, but buyers are shy of present prices of English and German, which are quoted respectively 3½@3¾c. and 2⅞@3c. French is freely offered and inclined to be easy at from 4½ to 5c.

LARD OIL.—Comparatively little interest was shown during the week, and the quiet of the previous week was repeated. Fluctuations in Chicago lard have not been serious, and oil here remains barely steady at current quotations. The market, in fact, for nearly a fortnight has shown a disposition to sag, and there has been a noticeable absence of life, both locally and for export account. Notwithstanding, prices have been well maintained, and, while concessions could be had for round lots, there is no quotable change in prices, which are still based upon prime lard oil at 57@59c.

MENHADEN.—Reports from the fishing fleet indicate a probable early closing of the season as but few fish have been taken in northern waters during the past week, and although the fish in southern waters are very fat and fair quantities have been taken the season of storms is now here and they may be driven to sea at any time. The movements of the fish have been very erratic and uncertain and no one can foretell where they will appear or in what numbers, and one season's experience is of no value as indicating what may be looked for in the next. Sales of 200 bbls. North Carolina are reported at 25c., delivered here; 500 bbls. Sound oil at 26c., and 400 bbls. New Jersey oil at 25c. Southern oil is now held at 24c. For pressed oils there is a good demand and prices are firm.

NEATSFOOT.—Conditions are in no-wise altered, and the market continues quiet and uninteresting upon the basis of former values. There is no scarcity now of cold test oils, and on the whole the market is easier, though without quotable change for any grade. We quote white neatsfoot at 60@62c. and prime at 48@50c.

RED OIL.—No improvement could be noted in the market, which remained quiet throughout and barren of any special feature. Saponified is still quoted at 4⅞@5c. and elaine at 39c.

TALLOW OIL.—The market has recently been fairly steady, though, following the course of raw material, an easier feeling was discernible, and rices are 1c. lower. We now quote prime at 50@51c.

SPERM AND WHALE.—There were some heavy receipts of sperm oil at New Bedford and stocks were materially increased. The market here was quiet and uneventful at unchanged prices. Stocks at New Bedford were: Sperm, 7,970 bbls., and whale, 2,450

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COTTON SEED PRODUCTS
Head Office, SUMTER, S. C.
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BRANDS—"Carolina," "Butter Oil," "Palmetto," Choice Summer Yellow; "Atlantic," Prime Summer Yellow; "Marlboro," Good Off Summer Yellow.
CABLE ADDRESS—"Lucile," Sumter.
CODES USED—"A B C," 4th Edition, "Twentieth Century" and Private.
For offers on crude oil wire Head Office, Sumter.

bbls. Sales were reported here of elephant oil at 36@38c., and a small lot of crude sperm was offered at 46c.

Mineral Oils.

BLACK.—Conditions are scarcely changed from those covered by previous reports. The market has been quiet at current quotations.

CYLINDER STOCKS.—In a small jobbing way there has lately been considerable business done, though transactions have been limited in quantity. The market, however, may be reported steady at old current figures.

NEUTRAL.—The market was again quiet during the week and the few sales reported were for small lots to fill odd shortages. No change has been made in current quotations.

PARAFFINE.—Though actual transactions were not heavy, the market showed a better tone and inquiries pointed to considerable trade ahead. Holders showed less anxiety to sell and prices were better maintained, though without quotable change.

SPINDLE.—Business was somewhat restricted and confined to small, unimportant transactions. There was, nevertheless, a stronger tone than shown for some time, and concessions were hard to obtain from current quotations.

Oil Cake, Meal, Etc.

The market for linseed cake is dull, as exporters will only bid $28 and the mills are holding for $29 per ton for November and December. Possibly business could be done at about 50c. less. There is a good demand for cotton cake and meal, and sales have been made of several round lots at $24 f. o. b. New Orleans.

Exports of Flaxseed from New York.

BY COUNTRIES, IN BUSHELS.

	For past week.	Since Aug. 1, 1900.	Same time 1899.
Belgium	....	109,012	8,407
Denmark	....	32,753	.....
England	24,694	158,943	51,964
France	....	24,912	37,151
Germany	1,961	280,989	33,075
Netherlands	58,719	348,695	282,627
Scotland	....	346	8,399
Totals	85,374	955,650	421,623

Exports of Flaxseed from Boston.

BY COUNTRIES, IN BUSHELS.

	For past week.	Since Aug. 1, 1900.	Same time 1899.
Belgium	58,693	58,693	.....
England	11,893	77,963	68,212
Netherlands	....	60,554	.....
Totals	70,586	197,210	68,212

Exports of Flaxseed from Philadelphia.

BY COUNTRIES, IN BUSHELS.

	For past week.	Since Aug. 1, 1900.	Same time 1899.
Scotland	....	16,634	.....
Totals	....	16,634	.....

Exports of Flaxseed from Baltimore.

BY COUNTRIES, IN BUSHELS.

	For past week.	Since Aug. 1, 1900.	Same time 1899.
Netherlands	....	135,483	.....
Totals	....	135,483	.....

Exports of Flaxseed from Montreal.

BY COUNTRIES, IN BUSHELS.

	For past week.	Since Oct. 1, 1900.
Belgium	25,202	25,202
England	16,774	16,774
Totals	41,976	41,976

Wax, Lard, Tallow, Etc.

PARAFFINE WAX.—There is no material change from the position of the prevous week. Demand for crude wax has become a trifle easier owing to completion of many contracts, and offerings have become correspondingly freer. The asking price of the outsiders has been reduced, as previously reported, to a basis of 5⅞ for 124-126 melting point. There has been a notable falling off in foreign shipments during the week, and something less than 500,000 lbs. was exported from this port. Quotations by principal holders are: Crude, 117 m. p., 6½c.; 124 m. p. (yellow), 6¼c.; refined, 125 m. p., 8½c.; 130 m. p., 9c.; 136 m. p., 9¾c.; 140 m. p., 14@14½c.

TALLOW.—There is a good home demand, with 4⅝c. bid and 4¾c. asked for hhds., and tcs. at 5c. asked and 4⅞c. bid. Buyers are only willing to take stock at market figures and will not bid the market up. There is almost no export demand, though London is 6d. up at last auction sales.

GREASES.—There is a good home demand, which takes up stocks as fast as they come to the surface. There have been sales of 60,000 lbs. good bone at 4½c., and 40,000 lbs. house at 4⅝c., at which the market closes steady.

Price of Lard at Chicago.

Nov.	Cash.	Nov.	Dec.
3.....	7.07½@7.10	7.00 @7.07½	6.77½@6.85
5.....	7.10 @7.12½	7.02½@7.07½	6.85 @6.90
6.....	—@—	—@—	—@—
7.....	7.05 @7.07½	6.97½@7.00	6.75 @6.82½
8.....	7.00 @7.02½	6.95 @7.02½	6.75 @6.82½
9.....	6.97½@7.00	6.92½@6.97½	6.77½@6.80

If you are contemplating the purchase of machinery of any kind, and desire to be brought in contact with the different manufacturers, the Oil, Paint and Drug Reporter will be glad to supply full information upon receipt of request.

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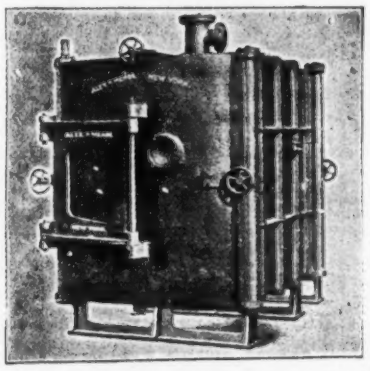
Naval Stores Statistics.

The following tabulated statement shows the movement of spirits of turpentine and rosin at New York, Wilmington, Charleston, Savannah and Brunswick during the month of October, 1900, and 1899:—

*RECEIPTS IN OCTOBER.

	1900. Spirits Turp.	1900. Rosin.	1899. Spirits Turp.	1899. Rosin.
New York	3,243	13,675	2,115	10,931
Wilmington ...	2,064	13,071	2,431	14,380
Charleston	74	3,167	102	4,014
Savannah	30,607	101,129	26,602	93,112
Brunswick	6,849	20,789	5,048	18,135
Totals	42,837	151,831	36,298	140,572
RECEIPTS SINCE APRIL 1.				
New York.....	26,195	100,125	23,459	88,137
Wilmington ...	19,007	71,772	22,588	84,166
Charleston	1,716	11,709	1,356	13,656
Savannah 259,933		617,481	245,102	664,388
Brunswick	54,647	131,742	52,584	148,072
Totals 361,498		932,829	345,089	998,419
EXPORTS IN OCTOBER.				
New York	1,406	4,107	2,725	10,384
Wilmington ...	....	18,465	3	10,262
Charleston	....	6,318	....	4,700
Savannah	21,920	65,919	21,038	54,177
Brunswick	3,234	15,842	2,551	10,558
Totals	26,560	110,651	26,317	90,081
EXPORTS SINCE APRIL 1.				
New York.....	13,720	75,056	18,751	112,555
Wilmington ...	1,480	94,153	6	59,738
Charleston	....	8,758	....	8,505
Savannah 166,227		339,468	168,682	324,372
Brunswick	38,644	97,809	39,512	111,838
Totals 220,071		615,244	226,951	617,008
STOCK OCTOBER 31.				
New York.....	474	25,250	1,450	19,543
Wilmington ...	627	35,559	629	59,354
Charleston	115	1,100	40	138
Savannah	35,921	130,369	25,940	145,844
Brunswick	3,306	57,649	5,598	47,177
Totals	40,443	249,927	33,657	272,056
*EXPORTS TO NEW YORK.				
From Wilm'gtn	1,363	472	405	197
Charleston	144	279	68	284
Savannah	6,318	10,160	3,744	14,589
Brunswick	2,084	4,281	712	6,636
Totals	9,909	15,192	4,929	21,706

* The above are not included in New York receipts, but are included in receipts at the given points. New York receipts are made up of outside points, as Georgetown, Florida, Mobile, etc.



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Is there a manufacturer who will give me the opportunity to prove to him that I can make myself valuable to him, either as inside or outside man, or both? I am 30 years of age, and have been in business for myself for twelve years, doing a jobbing and commission business. Care nothing about the amount of salary. All I desire is the opportunity. Address "O. D. L.," care of this paper.

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This company is looking for a man whose training and experience would warrant it in engaging him as general manager of the paint departments of our Eastern warehouses; communications by letter only; strictly confidential. Address W. W. HEROY, Chairman Com'l Dept., Pittsburgh Plate Glass Co., 62 and 68 Vandam st., New York city.

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About January, an experienced varnish maker, capable of making good car, implement and furniture varnish. Address "VARNISH MANUFACTURER," care of this paper.

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Capitalist offers to invest in chemical works, in a factory already established or in one to be erected. Address, with particulars, "C. E.," P. O. Box 485, New York city.

NEW YORK OFFICE OF
THE AMERICAN COTTON OIL CO.,
27 Beaver St., N. Y. City, November 8th, 1900.

The Board of Directors of this Company has this day declared a semi-annual dividend of THREE PER CENT. upon the Preferred Stock of this Company and a dividend of THREE AND ONE-HALF PER CENT. upon the Common Stock for the year ending August 31st, 1900, both dividends payable on December 1st, 1900, at the banking-house of Winslow, Lanier & Co., 17 Nassau Street, New York City.

The Transfer Books of the Company will be closed at 3 P. M. on November 15th, 1900, and will be reopened at 10 A. M. December 7th, 1900. JUSTUS E. RALPH, Secretary.

The Annual Meeting of the Stockholders of The American Cotton Oil Company will be held at the principal office of the Company, the Refinery, near Guttenburg, Hudson County, New Jersey, on Thursday, the 6th day of December, 1900, at 12 o'clock noon, for the purpose of electing Directors, and for the transaction of such other business as may properly come before the meeting.

The Stock Transfer Books of the Company will be closed at 3 P. M. on November 15th, 1900, and will be reopened at 10 A. M., December 7th, 1900.

By order of the Board of Directors.
JUSTUS E. RALPH, Secretary.

J. S. STILLWELL, M. Sc.
Technical Chemist & Engineer
Eleven years practical manufacturing experience as Chemist and Works Manager. Consultations, Reports, Duplication of Products, Processes worked out, Design and Construction of Special Machinery and Furnaces.
Room 10—69 Liberty St., New York.

TRADE ITEMS.

Among the visitors at the Drug Club last week were J. F. Myers, of Savannah, and F. W. Olin, of St. Louis.

The German Kieselguhr Works at Niederohe and Oberohe have combined with the Vereinigte Deutsche Kieselguhrwerke, under the latter name. They are represented in this country by Charles A. Wolff, 32-34 Park place, this city.

The American Cotton Oil Company
MANUFACTURERS AND REFINERS.
Cotton-seed Products
Oil, Cake, Meal, Linters, Ashes, Hulls.
Cable Address: AMCOTOIL, New York. THE AMERICAN COTTON OIL COMPANY, 27 Beaver St., New York.

PETROLEUM MARKET.

Saturday Noon, Nov. 10, 1900.

The item of prime importance during the past week has been the incoming of a new well in the vicinity of the Copley gusher in West Virignia whose initial production was about the same as was that of the now famous well. The operators had counted quite confidently upon the new well being a large one, but there were many who believed the Copley had merely tapped a circumscribed, though prolific pool. The new well, which is on an adjoining farm, proves that the source is of considerable extent, but only future developments can determine how far in either direction the territory will be found productive. As the new well also started off with an initial production of 6,000 bbls, per day and the Copley is still producing at the rate of 2,400 bbls, per day, it is regarded as certain that the Copley marks the discovery of a field of considerable importance and the incoming of other wells is now awaited with increased interest. The effect of this new strike has been to depress the market and operators fear for a continued decline in prices, which will make drilling in sections where only small wells may be expected unprofitable. It may be taken for granted that new development operations will be checked and that the next field report will show a still further reduction in the amount of new work under way.

Refined and Products.

The movement of refined for export is dependent almost entirely upon the situation of the tank fleet, as there is very little demand for refined in barrels, and, as a smaller number of tank steamers has been on this side during the past week, the total engagements have not exceeded 150,000 bbls. The price of barreled oil was reduced on Friday to 7.35c. for New York loading and to 7.30c. for Philadelphia loading. The principal foreign markets are steady. Quotations to-day by cable were: Antwerp, 18¾f.; Bremen, 7.00m.; London, 6⅛d., and Liverpool, 6⅛@6¼d. Freight rates were firm at 3s. 3d.@3s. 6d., hence to London, and 3s. 3d.@4s. 3d. to Continental ports, as to port and vessel. Home trade lots have been in fairly active request, and are steady on the basis of 8¼c. for 150 degrees water white from tanks and 11¼c. in barrels.

Cases for export have been in light request, and sales of about 100,000 are reported. The price for plain tops has been reduced to 8.65c. Freight rates are firm. Nominal rates for large vessels are: For Amoy, 25@26c.; Calcutta, 21@22c.; Colombo, 24@25c.; Java, 24@25c.; Padang, 25@26c.; Hong Kong, 27@28c.; Rangoon, 26@27c.; Saigon, 23@24c.; Shanghai, 27@28c.; Singapore, 23@24c.; and Yokohama, 26@27c.

Crude for export has been in active request, and sales of about 125,000 barrels are reported. Washington crude is quoted at 7.35c. in barrels. Cases for export have been in light request, and no sales are reported.

Crude naphtha has been steady at 9.55c. For export sales of 10,000 bbls. are reported.

If you are contemplating the purchase of machinery of any kind, and desire to be brought in contact with the different manufacturers, the Oil, Paint and Drug Reporter will be glad to supply full information upon receipt of request.

Closing Quotations.

CRUDE.

National Tran. certificates, ℔ bbl.	$1 05 @1 07
Washington, crude, in bbls., ℔ gal.	7.35
Washington, crude, in bulk	4.85
Residuum, bbls., for export	6½@ 7

CRUDE AT THE WELLS.

The following are the prices paid by the pipe lines for crude as delivered from the wells:

	1900.	1899.
Tiona ℔ bbl.	$1.22	$1.71
Pennsylvania	1.07	1.56
Barnesville	—	1.46
Corning	90	1.39
New Castle	82	1.31
North Lima	80	1.11
South Lima	75	1.06
Indiana	75	1.06
Somerset	75	—
Lacy	69	—

REFINED—FOR EXPORT.

Cargo lots for export ℔ gal.	— @7.35
In bulk	— @4.85
Philadelphia loading	— @7.30

REFINED—JOBBING LOTS.

In barrels, pkgs. included.

120 fire test, S. W. ℔ gal.	— @ 10
130 fire test, S. W.	— @ 10¼
150 fire test, W. W.	— @ 11
In bulk from tanks	— @ 8½
300 fire test	9¾@ 10¼

REFINED IN CASES—110 FIRE TEST.

Two five low screw, cargo lots	8.65
5,000 to 10,000	8.75
1,000 to 5,000	8.85
700 to 1,000	8.95
400 to 700	9.05
300 to 400	9.15
200 to 300	9.25
100 to 200	9.45
Under 100	9.65

NAPHTHA AND GASOLENE.

Naphtha, crude, car lots, 68@72 deg.	— @ 9.55
crude, cargo lots, 68@72 deg.	— @ 9.55
crude, 70 deg.	—@10¼
sweet, 62 or 63 deg.	12 @12¼
70 deg.	12¼@12¾
76 deg.	13 @13¼
"stove"	— @12
Gasolene, 86 deg.	— @16
88 deg.	— @18
90 deg.	— @21

Petroleum Statistics.

RUNS—PENNSYLVANIA OIL.

		Day.	Total Reported.
Friday,	Nov. 2	63,339	152,100
Sat.-Sun.,	" 3 & 4	116,689	268,998
Monday,	" 5	86,953	255,951
Tuesday,	" 6	101,856	457,807
Wednesday,	" 7	91,586	549,393
Thursday,	" 8	....	.....

	1897.	1898.	1899.	1900.
Jan.	2,670,695	2,745,712	2,420,071	2,836,845
Feb.	2,637,771	2,442,436	2,222,889	2,514,036
March.	2,911,172	2,814,029	2,649,528	2,945,673
April.	2,780,575	2,652,552	2,618,219	2,880,993
May.	2,852,124	2,681,118	2,765,791	3,074,578
June.	2,929,868	2,563,767	1,740,807	3,000,272
July.	2,992,682	2,487,691	2,776,507	3,032,983
Aug.	3,062,668	2,662,849	2,872,114	3,125,114
Sept.	3,002,002	2,525,032	2,764,932	2,920,457
Oct.	3,023,053	2,847,837	2,833,408	.....
Nov.	2,918,954	2,485,140	2,806,384	.....
Dec.	2,894,296	2,589,197	2,736,687	.....
Year.	34,274,700	31,100,360	32,207,577	.....
Average	2,893,725	2,591,697	2,683,963	2,925,650

DELIVERIES—PENNSYLVANIA OIL.

		Day.	Total Reported.
Friday,	Nov. 2	87,513	329,327
Sat.-Sun.,	" 3 & 4	153,838	483,165
Monday,	" 5	121,846	605,011
Tuesday,	" 6	97,463	702,478
Wednesday,	" 7	106,423	808,901
Thursday,	" 8	....	.....

	1897.	1898.	1899.	1900.
Jan.	2,533,263	2,993,813	2,475,510	2,887,970
Feb.	2,305,390	2,132,151	1,899,859	2,747,667
March.	2,772,133	2,625,124	2,625,415	2,797,661
April.	2,453,728	2,421,383	2,377,483	2,844,496
May.	2,546,693	2,392,839	2,578,579	2,793,247
June.	2,555,959	2,134,814	2,538,921	2,880,486
July.	2,707,317	2,563,391	2,357,716	2,756,173
Aug.	3,100,208	2,696,584	2,779,114	3,383,582
Sept.	2,951,221	2,585,253	2,700,060	3,031,439
Oct.	3,628,538	2,839,481	2,739,176	.....
Nov.	3,312,597	2,398,656	2,601,115	.....
Dec.	2,753,008	2,375,731	2,593,652	.....
Year.	33,621,058	30,367,611	30,276,630	.....
Average	2,801,755	2,530,634	2,523,052	2,902,525

CHARTERS—CRUDE EQUIVALENT.

		Day.	Total.	Av'ge.
Friday,	Nov. 2	41,619	73,365	36,683
Sat.-Sun.,	" 3 & 4	109,167	182,532	45,633
Monday,	" 5	49,524	232,056	46,411
Tuesday,	" 6	....	232,056	38,676
Wed'sday,	" 7	123,810	355,866	50,838
Thursday,	" 8	54,127	409,993	51,249

	1897.	1898.	1899.	1900.
Jan.	1,960,649	2,701,308	1,736,232	1,859,255
Feb.	1,692,064	1,882,355	1,550,794	1,343,926
March.	1,917,670	2,203,141	2,461,826	2,175,073
April.	2,324,256	1,759,600	1,855,857	1,819,763
May.	2,101,829	1,971,260	2,214,071	1,962,851
June.	2,204,998	2,325,911	2,179,118	2,292,075
July.	2,533,853	1,991,972	2,165,092	2,061,761
Aug.	2,176,978	2,327,140	2,741,504	2,465,198
Sept.	2,524,897	2,105,151	2,199,802	2,164,186
Oct.	2,619,428	1,670,084	2,241,322	2,323,275
Nov.	2,360,634	2,611,940	2,292,703	.....
Dec.	1,968,572	1,424,940	1,692,790	.....
Year.	26,386,028	23,973,908	25,331,111	.....
Av'ge.	2,198,830	1,997,820	2,110,926	2,046,736

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases during the week ending Nov. 9, and from Jan. 1, were as follows:

	Week.	Year.	1899.
Refined, bbls. & blk.	173,400	9,426,900	9,410,200
Refined, cases	102,000	11,158,000	13,666,000
Crude, bbls. & blk.	125,700	2,038,700	1,806,800
Crude, cases	.....	135,000	102,000
Naphtha, bbls.	8,500	240,100	219,800
Residuum, bbls.	....	300,800	345,600
Lubricating, bbls.	8,500	85,700	16,500
Total, bbls. cde. eq.	457,249	21,096,524	22,402,258

CLEARANCES FOR THE WEEK.

During the week ending Nov. 9, and since Jan 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1899.
Refined	10,378,677	431,833,207	406,595,173
Crude	263,100	3,629,292	2,476,889
Naphtha	4,347	10,663,913	8,376,663
Residuum	.....	9,080,604	6,939,224

EXPORT STATISTICS.

The following table shows the total exports from the port of New York and from the United States, reduced to crude equivalent, in gallons for the week ending Nov. 9; also total shipments to date, with comparisons with 1899:

From N. Y. for week ending Nov. 9.	14,101,336
Total from N. Y. from Jan. 1, 1900.	579,371,637
Same period last year.	556,998,839
Increase	22,372,798
From U. S. for week ending Nov. 9.	25,626,852
Total from U. S. since Jan. 1, 1900.	941,948,663
Same period last year.	944,725,044
Decrease	2,776,381

TOTAL EXPORTS BY PORTS.

	1900.	1899.
New York	579,371,637	556,998,839
Philadelphia	312,231,046	345,018,136
Baltimore	49,279,626	41,643,363
Boston	384,298	446,259
San Francisco	682,056	708,397
Grand totals	941,948,663	944,725,044

Foreign Quotations.

REFINED.

	Antwerp.	Bremen.	London.
Monday	18¾@—	7.00	—@6⅛
Tuesday	18¾@—	7.00	—@6⅛
Wednesday	18¾@—	7.00	—@6⅛
Thursday	18¾@—	7.00	—@6⅛
Friday	18¾@—	7.00	—@6⅛
Saturday	18¾@—	7.00	—@6⅛

PETROLEUM CHARTERS.

New York.

Following is a list of vessels chartered and loading or to load petroleum at New York Philadelphia, Baltimore and Boston. Quantities are refined in bbls. unless stated otherwise

Week ending March 2.

Br shp Zemindar, Japan, 25c. cs 80,000

Week ended April 13.

Am shp R. D. Rice, Japan, 25@26c. cs 80,000

Week ended May 4.

Am shp Josephus, Hong Kong, 25c. cs 50,000

Week ended May 18.

Am shp A G Ropes, Japan, 24⅛@25½c. cs 80,000
Am bk Mary C Hale, Pernambuco. cs 30,000

Week ended June 8.

It bk Margherita, Penang or Singapore, 23@24c. cs 35,000

Week ended June 22.

Ger bk Nal, Japan, 25@26c. cs 110,000

Week ended Aug. 17.

Am shp St Francis, Japan, 26c. cs 70,000

Week ended Aug. 24.

Am shp W F Babcock, Japan, 27@28c. cs 80,000

Week ended Aug. 31.

Br shp Troop, Japan, 28@29c. cs 60,000
It shp Saturnina Fanny, Java, 26, 27 and 28c. cs 6,500

Week ended Sept. 7.

Nor bk Patagonia, U K or Cont, 3s. 6d. 7,000

Week ended Sept. 14.

Ger bk Henriette, Japan, 28c. cs 120,000
Ger shp Theo Fischer, London, 3s. nap 10,500

Week ended Sept. 21.

Br shp County of Haddington, Shanghai, 30c. cs 70,000
Br shp Cleomene, Rangoon, 27c. cs 70,000
Br shp County of Kinross, Shanghai, 30c. cs 70,000
Br shp County of Caithness, Shanghai, 30c. cs 70,000

Week ended Sept. 28.

Ger bk Dora, London, 3s 9d. nap 8,500

Week ended Oct. 5.

Br shp Forth, Calcutta, 22c. cs 70,000

Week ended Oct. 12.

Ger shp Louise, London, 3s 9d. 9,000
Br shp Ems, Calcutta, 22c. cs 70,000

Week ended Oct. 19.

Br str Arara, Java, 40c. cs 140,000
Am shp L Schepp, Manila, 28c. cs 65,000
It bk Oropa, Java, 31c. cs 30,000
Br str Queen Eleanor, H'g Kong, 38c. cs 140,000
Br str Queen Olga, Java, 40c. cs 125,000
Br str Kelvindale, Hong Kong, 36c. cs 100,000

Week ended Oct. 26.

Br str Ranza, Hong Kong, 32c. cs 185,000
Br bk Ensenada, Zanzibar, pt. cs 40,000

Week ended Nov. 2.

Ger shp Fidelio, Liverpool, 3s 9d. nap 7,500
Am shp I F Chapman, Japan, 25@26c. cs 85,000

Week ended Nov. 9.

Ger shp Heinrich, London, 3s 3d. nap 8,500
Ger shp Landseer, London, 3s 3d. lub 8,500
Br bk Howard D Troop, Shanghai, 27c, cs 90,000

Philadelphia.

Week ended Aug. 31.

Port bk Julio, Lisbon, pt. 2,500
Ger shp Renee Rickmers, Japan, 28@29c. cs 90,000

Week ended Sept. 7.

Ger bk Marie, Dublin, 3s. 9d. 8,000

Week ended Sept. 14.

Ger bk Wandabek, Japan, 28½c. cs 100,000
Ger shp Mabel Rickmers, Japan, 28½c. cs 85,000
Ger shp Rickmer R'km's, Japan, 28½c. cs 85,000

Week ended Sept. 21.

It bk Teresita, Oporto, 4s 3d. 3,500

Week ended Sept. 28.

Br str Georgian Prince, U. K., or Cont., p. t. 25,000

Week ended Oct. 5.

Am sch Ed L Stotesbury, Liverpool, 5s. 7,800

Week ended Oct. 12.

It shp Nuova Eleanora Madre, Marseilles, 3s 10½d. 6,000

PETROLEUM CLEARANCES.

Following are the clearances of petroleum from the ports of New York, Philadelphia, Baltimore, Boston and San Francisco on the dates named. Refined, unless otherwise specified:

New York.

Oct. 29.

Br sh Rowena, Sydney, 22,750 cs
Am str Cherokee, Turks Island, 4 bbls, 11 cs

Oct. 30.

Nor str Tjomo, Hayti, 544 cs
Br str Grenada, C Bolivar, 35 cs
Br str Grenada, Trinidad, 800 cs
Br str Grenada, Grenada, 1,250 cs
Am str Advance, Colon, 230 cs
Br str Cornwall, Sydney, 14,000 cs
Br str Cornwall, Melbourne, 15,000 cs

Oct. 31.

Br str Amana, Colombo, 10,000 cs
Br str Amana, Calcutta, 30 drs gas
Am str Vigilancia, Havana, 2 cs
Br str Silvia, St Johns, 630 bbls, 1,250 cs ref, 1 bbl gas
Br str Queen Margaret, Mollendo, 100 cs
Br str Queen Margaret, Pisco, 500 cs
Br str Queen Margaret, Valparaiso, 30,150 cs
Br str Queen Margaret, Punta Arenas, 50 cs
Br str Queen Margaret, Callao, 1,000 cs

Nov. 1.

Bg Atalanta, Porto Rico, 1,400 cs
Ger str Arnold Luyken, Demerara, 2,400 cs
Br str Inchulva, East London, 14,080 cs
Br str Inchulva, Cape Town, 20,225 cs
Br str Inchulva, Port Natal, 1,860 cs
Dtch str Prins Maurits, Hayti, 295 cs, 1 bbl
Dtch str Prins Maurits, Porto Cabello, 200 cs
Dtch str Prins Maurits, Cumana, 100 cs
Dtch str Prins Maurits, Carupano, 220 cs

Nov. 2.

Br str Acara, Shanghai, 163,000 cs
Br sch Carrie Easler, Liverpool, N S, 225 bbls
Br sch Carrie Easler, Halifax, 700 bbls
Sch Norombega, Porto Rico, 500 cs
Ger str Weimar, Bremen, 200 bbls
Br str Eastern Prince, Santos, 6,200 cs
Br str Eastern Prince, Pernambuco, 7,000 cs
Br str British King, Antwerp, 7 bbls
Am str Santiago de Cuba, Cuba, 850 cs
Br str Lord Antrim, Cape Town, 10,250 cs ref, 10 cs nap
Br str Alps, Hayti, 11 bbls, 860 cs ref, 1 cs ben
Br str Menominee, London, 500 bbls
Br str Pocasset, Malta, 5,000 cs
Br str Pretoria, Bermuda, 87 bbls, 25 cs
Br str Melbourne, Sydney, 13,000 cs ref, 275 cs nap
Br str Melbourne, Melbourne, 18,500 cs
Br str Melbourne, Adelaide, 8,500 cs ref, 25 cs ben
Br str Altai, Kingston, 9 bbls, 1,395 cs
Br str Altai, Cartagena, 20 cs
Br str Altai, Savanilla, 1 cs
Br str Altai, Port Limon, 8,040 cs ref, 3 cs ben

Nov. 3.

Br bk Weathersfield, Melbourne, 10,000 cs

Nov. 5.

Br str Cevic, Liverpool, 13 bbls
Br str Delaware, Dublin, 1,600,000 gls blk
Br sch Leonard Parker, Rio Grande do Sul, 9,890 cs
Br sch Laconia, Bahia, 16,250 cs
Am bk Mary Hasbrouck, Havana, 26,310 cs cde
Am bk Hiram Emery, Auckland, 23,250 cs ref, 100 cs ben

Nov. 7.

Nor str Belvernon, Hayti, 400 cs
Ger str Diamant, Savona, 1,500,000 gls blk
Dtch str La Hesbaye, Antwerp, 1,125,500 gls blk
Nor str Talisman, Guadaloupe, 750 cs
Nor str Talisman, Martinique, 750 cs

Nov. 8.

Ger str Washington, Flushing, f o, 1,675,000 gls blk & 3,000 cs

Philadelphia.

Oct. 24.

Br str Minnesota, London, 1,250 bbls

Oct. 26.

Fr bk Quevilly, Rouen, 1,286,180 gls cde blk

Oct. 29.

Br str Dumfriesshire, Hiogo, 104,050 cs

Oct. 30.

Br str Oriflamme, Rouen, 1,613,265 gls cde blk
Ger str Standard, Flushing, f o, 1,259,488 gls blk
Port bk Venturosa, Oporto, 3,500 bbls, 12,050 cs ref, 100 cs nap

Nov. 3.

Br str William Storrs, Hiogo, 128,515 cs
Br str Aureole, Rouen, 1,690,086 gls cde blk
Ital bk Annina, Lisbon, 2,150 bbls, 4,636 cs

Nov. 5.

Fr str Luciline, Dunkirk, 1,704,721 gls cd blk

Boston.

Str Halifax, Halifax, 15 bbls

San Francisco.

Nov. 1.

Str Australia, Tahiti, 70 cs

EXPORTS OF PETROLEUM.

Following are the exports of petroleum from the port of New York, in gallons, during the past week and since Jan. 1, as also the exports during the corresponding period of last year:

Refined.

	For week.	Since Jan. 1.	Same time last year.
Aalborg	.....	255,352	497,037
Aarhuus	.....	445,650	2,075,000
Acajutle	.....	.....	14,500
Acra, W. C. A.	.....	20,000	.....
Adelaide	81,600	1,108,400	1,277,896
Aden	.....	181,500	67,500
Alexandria	.....	205,000	310,540
Algiers	.....	304,880	541,248
Algoa Bay	.....	517,616	1,029,087
Amoy	.....	.....	525,000
Amsterdam	.....	14,656,615	11,316,500
Anjier, f. o.	.....	1,992,370	11,728,320
Antigua	.....	304,970	43,749
Antofagasta	.....	24,500	22,000
Antwerp	1,125,850	17,471,048	12,771,320
Arica	.....	12,000	8,000
Auckland	223,200	867,225	610,240
Avonmouth	.....	11,050,000	12,950,000
Axim, W. C. A.	.....	100,000	.....
Azores	.....	125,849	123,258
Bahamas	.....	3,159	4,277
Bahia	162,500	959,320	1,343,270
Baracoa	.....	260	.....
Barbadoes	.....	324,011	421,919
Baranquilla	.....	47,000	62,550
Batavia	.....	3,032,370	.....
Beira	.....	25,720	49,600
Belfast	.....	1,600,000	1,600,000
Belize	.....	122,800	139,511
Bermuda	4,725	209,309	177,528
Bombay	.....	.....	1,460,440
Bonny	.....	35,000	20,000
Bluefields	.....	66,490	170,602
Bocas del Toro.	.....	49,917	47,553
Bordeaux	.....	10,500	1,837
Bremen	10,000	25,152	10,000
Bremerhaven	.....	2,440,000	3,115,000
Brisbane	.....	539,520	1,114,150
Bristol	.....	5,900	10,000
Buenos Ayres	.....	6,551,278	5,224,775
Calcutta	.....	1,920,250	5,900,190
Caldera	.....	1,000	1,750
Callao	10,000	461,300	232,000
Campeche	.....	1,350	910
Canary Islands.	.....	364,250	865,800
C. Coast, WCA.	.....	15,000	255,160
Cape Gracias	.....	2,800	3,660
Cape Town	296,580	1,905,142	1,457,984
Cape Verde Isl.	.....	.....	3,100
Cartagena	200	189,810	284,772
Carupano	2,200	11,550	32,350
Casa Blanca	.....	60,000	30,000
Ceara	.....	269,580	214,925
Ceiba	.....	4,850	2,750
Cette	.....	367,819	613,171
Charl'ton, P.E.I.	.....	91,000	82,900
Cheefoo	.....	525,000	550,000
Christiania	.....	1,559,000	2,600,000
Ciudad Bolivar	350	67,100	58,620
Colombo	100,000	310,000	100,000
Colon	2,300	515,209	373,753
Copenhagen	.....	4,385,100	1,560,000
Coquimbo	.....	.....	10,000
Corinto	.....	.....	28,000

Cork	.....	.....	1,994,995
Coro	.....	27,540	14,995
Corrall	.....	69,000	45,000
Cuba	8,520	443,664	481,354
Cumana	1,000	5,500	1,300
Curacoa	.....	155,549	147,398
Delagoa Bay	.....	9,000	344,710
Demerara	24,000	482,992	396,638
Desterro	.....	297,460	326,336
Domenica	.....	26,380	27,598
Dorchester, N.B.	.....	4,500	.....
Dover	.....	20,098,406	26,605,021
Dublin	1,600,000	6,800,000	1,600,000
Dunedin	.....	117,000	402,320
Dunkirk	.....	.....	153,621
Dutch Guiana	.....	237,000	269,352
East London	135,880	853,600	696,591
Esjberg	.....	150,500	.....
Etem	.....	26,000	9,000
Falmouth	.....	.....	8,598
Flushing, f. o.	1,705,000	94,696,217	100,726,000
Forcados	.....	42,500	.....
Frederica	.....	529,700	638,250
Freemantle	.....	1,033,120	1,255,800
French Guiana	.....	77,475	54,417
Frontera	.....	100	5,000
Geestemunde	.....	2,225,000	.....
Gefle	.....	926,617	416,152
Genoa	.....	100	.....
Gibraltar	.....	602,640	641,328
Gothenburg	.....	582,967	2,032,144
Grenada	12,500	91,951	79,950
Greytown	.....	156,185	79,721
Guadaloupe	7,500	169,000	119,650
Guanaco	.....	510	.....
Guanta	.....	9,500	7,000
Guayaquil	.....	365,400	247,000
Hakodate	.....	664,000	626,440
Halifax	35,000	279,971	546,434
Hamburg	.....	2,795,000	4,538,900
Havre	.....	247,268	600
H. Breton, N. S.	.....	1,040	1,633
Hayti	21,590	443,876	502,312
Hernosand	.....	306,709	307,050
Hiogo	.....	850,000	817,510
Hodeidah	.....	300,000	86,000
Hong Kong	.....	18,408,200	19,845,060
Honolulu	.....	410,000	545,000
Hull	10,000	3,755,000	1,169,900
Humacao	.....	4,000	.....
Iquitos	.....	3,440	.....
Iquique	.....	7,500	7,500
Jamaica	14,082	801,578	852,264
Jeddah	.....	100,000	.....
Junin	.....	5,000	6,000
Kingston, N. B.	.....	.....	1,250
Kjoge, Den	.....	211,400	245,800
Kobe	.....	.....	682,470
Koenigsberg	.....	233,650	172,392
Kolding	.....	.....	141,197
Konakry, W.C.A	.....	.....	45,000
Kurrachee	.....	200,000	225,000
La Guayra	.....	470,285	483,154
Lagos	.....	166,660	308,000
La Guna	.....	.....	200
La Libertad	.....	.....	45,000
La Plata	.....	15,000	35,000
Las Palmas	.....	663,340	.....
La Union	.....	.....	1,500
Lisbon	.....	25,100	28,733
Liverpool	850	7,424,737	6,656,454
Liverpool, N. S.	11,250	11,250	.....
Livingston	.....	9,100	11,234
London	25,000	33,670,792	23,092,404
Lulea	.....	266,800	109,750
Lyttleton	.....	147,880	219,200
Maceio	.....	493,600	373,000
Madagascar	.....	260,000	.....
Madeira	.....	65,500	68,000
Madras	.....	.....	350,000
Malmo	.....	872,500	.....
Malta	50,000	100,000	.....
Manaos	.....	283,398	438,470
Manchester	.....	1,855,800	535,450
Manila	.....	572,090	.....
Maracaibo	.....	148,150	139,695
Maranham	.....	442,924	315,647
Martinique	7,500	245,718	344,561
Mauritius	.....	.....	288,000
Melbourne	423,600	3,622,706	5,160,690
Mollendo	1,000	16,250	10,000
Moluccas	.....	.....	92,000
Montevideo	.....	2,812,156	2,208,272
Montreal	.....	464,623	401,579
Montserrat	.....	380	1,384
Morocco	.....	10,000	.....
Mossel Bay	.....	232,388	71,460
Naples	.....	369,115	530,331
Nassau	.....	88,304	72,257
Newcastle	.....	7,000	10,000
Newcastle, N.B.	.....	.....	5,200
Nordenham	.....	79,500	.....
Old Calabar	.....	120,660	50,000
Oporto	.....	.....	326,952
Oran	.....	.....	206,000
Palmboeuf	.....	248,779	327,622
Palermo	.....	323,000	.....
Pascasmayo	.....	18,000	11,000
Para	.....	1,596,948	2,104,662
Parahyba	.....	268,500	202,000
Payta	.....	26,000	4,000
Penang	.....	1,546,870	1,487,190
Pernambuco	70,000	2,481,410	2,155,220
Pimental	.....	31,000	10,000
Pisqua	.....	1,000	.....
Pisco	5,000	29,000	5,500
Pitea	.....	.....	75,000
Plymouth	.....	2,575,000	1,328,172
Port Chalmers	.....	407,100	55,200
Port du Bouc	.....	256,492	.....
Port Elizabeth	.....	291,260	775,446
Portishead	.....	.....	59,602
Port L. du Rhone	.....	.....	982,632
Port Limon	8,040	110,476	95,923
Port Natal	18,200	1,252,530	2,060,230
Porto Cabello	2,000	252,440	262,384
Porto Rico	19,000	637,502	325,256
Progreso	.....	6,320	16,180
Pozzouli	.....	310,750	.....
Puerto Barrios	.....	15,382	13,000
Puerto Cortes	.....	42,650	35,986
Punta Arenas	500	35,640	38,948
Rangoon	.....	.....	1,586,370
Reunion	.....	335,000	280,000
Rio G. do Sul	96,900	1,499,900	1,150,290
Rio Janeiro	.....	4,980,500	2,887,500
Rosario	.....	1,764,533	1,289,976
Rotterdam	.....	36,349,350	37,485,000
Rouen	.....	389,191	4,596
Ruatan	.....	750	.....
Sackville, N. B.	.....	27,500	10,000
Salaverry	.....	32,500	26,000
Salt Pond	.....	10,000	.....
Samarang	.....	2,560,400	917,210
San Andreas	.....	27,175	61,638
Saigon	.....	2,147,010	1,546,320
San Domingo	14,290	374,311	147,021
San Fernando	.....	23,200	4,800
Santa Martha	.....	.....	500
Santos	62,000	3,065,500	3,066,260
Savanilla	10	363,700	236,041
Savona	1,500,000	1,500,000	1,400,000
Shanghai	1,630,000	21,209,510	21,760,320
Sierra Leone	.....	23,000	45,350
St. Croix	.....	45,211	41,164
St. John, N. B.	.....	3,000	38,000
St. John's, N. F.	44,000	630,903	546,084
St. Kitts	.....	78,884	82,535
St. Lucia	.....	61,439	43,864
St. Martins	.....	5,350	6,880
St. Nazaire	.....	.....	359,993
St. Pierre Miq	.....	.....	14,379
St. Thomas	.....	19,200	24,350
St. Vincent, C.V.	.....	72,650	46,680
Sourabaya	.....	4,024,370	.....
South Shields	.....	2,440,000	1,215,000
Stockholm	.....	391,717	687,950
Sunderland	.....	2,500,000	1,270,000
Sundsvall	.....	753,150	.....
Svendborg	.....	.....	134,850
Sydney	483,400	4,698,880	5,250,870
Sydney, C. B.	.....	10,000	.....
Talcahuano	.....	988,250	2,296,500
Tampico	.....	200	6,540
Tilt Cove	.....	.....	9,530
Torutos, Peru	.....	740	.....
Trieste	.....	3,000	.....
Trinidad	7,700	511,780	502,187
Truxillo	.....	28,650	7,450
Tsintau, China	.....	687,600	570,370
Tuborg	.....	625,875	352,245
Turks Island	500	10,152	8,086
Valparaiso	301,500	4,016,280	1,566,260
Venice	.....	1,300,000	.....
Vera Cruz	.....	7,920	9,500
Vienna	.....	3,000	.....
Victoria	.....	90,000	.....
Waterford	.....	.....	203,889
Wellington	.....	540,820	368,260
Yokohama	.....	18,623,230	5,251,490
Yucatan	.....	1,000	.....
Zanzibar	.....	954,000	1,255,270
Totals		10,378,677	431,819,457	417,016,865

Crude.

Algoa Bay	.....	.....	2,679
Brisbane	.....	.....	15,989
Cuba	.....	3,049	200
Demerara	.....	1,648	510
Hamburg	.....	12,000	.....
Havana	263,100	3,528,970	2,261,818
Melbourne	.....	9,905	.....
Porto Rico	.....	74,020	135,500
Progreso	.....	.....	243
St. John's, P. R.	.....	.....	160,000
Tampico	.....	.....	100,000
Totals	263,100	3,629,292	2,676,939

Naphtha.

Adelaide	240	7,492	5,776
Algoa Bay	.....	147	130
Antigua	.....	300	.....
Auckland	.....	23,800	7,000
Bahia	.....	337	1,112
Belize	.....	120	.....
Bermuda	.....	5,288	17,645
Bluefields	.....	665	.....
Brisbane	.....	360	1,110
Buenos Ayres	.....	35,092	81,605
Calcutta	300	300	.....
Canary Islands	.....	1,400	.....
Cape Town	100	4,347	2,567
Ceara	.....	.....	50
Cette	.....	.....	21,860
Cuba	.....	2,886	253,530
Curacoa	.....	342	679
Delagoa Bay	.....	.....	11,409
Dunedin	.....	480	8,849
Durban	.....	19	.....
East London	.....	2,774	600
Flushing, f. o.	.....	.....	710,000
Fort Blaye	.....	1,551,534	802,479
Frederica	.....	25,450	.....
Freemantle	.....	4,134	680
Greytown	.....	190	.....
Guadaloupe	.....	10	.....
Guayaquil	.....	1,000	.....
Havre	.....	657,365	927,094
Hayti	15	3,035	3,406
Honolulu	.....	400	1,200
Hull	.....	.....	262,297
Iquique	.....	.....	1,000
Jamaica	.....	417	199
Liverpool	.....	3,129,771	1,772,483
London	.....	2,861,669	3,078,761
Lyttleton	.....	2,515	5,320
Maceio	.....	10	.....
Manaos	.....	67	6,840
Manila	.....	150	.....
Maracaibo	.....	10	48
Maranham	.....	105	95
Martinique	.....	10	.....
Melbourne	.....	32,720	67,490
Montevideo	.....	10,622	3,890
Mossel Bay	.....	.....	114
Nordenham	.....	1,070,000	.....
Palmboeuf	.....	101,172	85,615
Para	.....	115	383
Pernambuco	.....	405	10
Philippine Isl	.....	50	.....
Port Chalmers	.....	12,900	.....
Port Elizabeth	.....	600	50
Portishead	.....	.....	567,458
Port Limon	30	307	134
Port Natal	.....	3,720	2,442
Porto Cortez	.....	427	47
Porto Rico	.....	4,200	1,327
Progreso	.....	.....	50
Rio Janeiro	.....	1,920	975
Rosario	.....	600	500
Rotterdam	.....	.....	10
Rouen	.....	196,954	125,188
San Andreas	.....	625	100
San Domingo	.....	200	.....
Santos	.....	2,000	3,000
Savanilla	.....	30	310
St. Croix	.....	135	95
St. John's, N. F.	52	604	140
St. Nazaire	.....	.....	50,014
St. Thomas	.....	115	.....
Stockholm	.....	20,400	126,984
Sydney	2,750	109,419	21,532
Talcahuano	.....	400	200
Tampico	.....	.....	5
Trinidad	.....	1,100	42
Tuborg	.....	647,970	8,000
Valparaiso	.....	2,550	600
Vera Cruz	.....	.....	20
Wellington	.....	59,829	4,879
Totals	4,447	10,604,086	9,273,442

NAVAL STORES.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 39.

Saturday Evening, Nov. 10, 1900.

SPIRITS OF TURPENTINE.—While the market cannot be said to have been an active one during the past week, there was at least sufficient doing to excite some interest and bring about slight fluctuations. Savannah opened firm at the beginning of the week at 40c. Receipts were 5,950 bbls., as against 5,842 for the same week last year. Exports aggregated 6,488 bbls., against 4,761 in 1899, while sales amounted to 3,523, as against 2,693 for the same week in the preceding year. Stocks on hand, however, were heavier by about 7,800 bbls. Heavy exports and anticipation of the tank steamer Inis brought about a hardening of the market, and values went up a full cent before the end of the week, the closing Savannah price being 40½@41c. firm. At New York a fair business was done upon the basis of 43½c., varnishmakers being the principal buyers. Deliveries from yard were in excess of receipts, and the remaining stock on Friday night had fallen to 575 bbls. On this account and in sympathy with the advancing tendency in the South, holders were firmer in their views, and quotations were advanced to 44@44½c. for Southerns and machines, respectively. The only business done, however, was upon the basis of 43½@44c.

ROSIN.—The market remained very firm on all grades throughout the week and considerable shipments were made to Western and other outside points. Demand has been particularly good for the common sorts, which are being rushed forward by barge before the close of navigation. Exports, on the other hand, have been seriously hampered by the present high rate of ocean freight, which precludes heavy shipments. E, F and G rosin continue in good request, and are as scarce as ever and very firm at quotations. Pales are also moving well at unchanged prices.

TAR AND PITCH.—Demand for tar has fallen off considerably, but available stocks are very low, and holders are more than usually firm in their views at old current quotations of $2.50 for regular and $4.75 for oil barrels. The stock remaining in yard at close of the week was only 469 barrels. Pitch continues quiet but steady at prices previously quoted of $1.60@1.75.

The following table gives the receipts and deliveries of naval stores at and from yard New York for the week ending Nov. 9, 1900:

	Spts. of Rosin.	Turp.	Tar.
Stock in yard Nov. 2, 1900	26,539	1,010	499
Receipts	3,990	843	254
Deliveries	3,841	1,278	284
Stock in yard Nov. 9, 1900	26,688	575	469

Savannah, Ga., Nov. 9., 1900.

Spirits firm, 40½@41c.; receipts, 1,455; exports, 273; sales, 830; stock, 38,830. Rosin firm; receipts, 4,506; exports, 7,092; sales, 1,097; stock, 126,057. Prices unchanged.

Charleston, S. C., Nov. 9, 1900.

Turpentine—Market firm, 40c.; sales, 30 casks. Rosin steady; unchanged.

New Orleans, La., Nov. 9, 1900.

Receipts—Rosin, 171 barrels; turpentine, 29.

Wilmington, N. C., Nov. 9, 1900.

Spirits turneptine firm, 39½@40c.; receipts, 54. Crude turpentine steady, $1.40@$2.40; receipts, 14. Rosin steady, $1.20@$1.25; receipts, 381. Tar firm, $1.55; receipts, 199.

Liverpool, Nov. 9, 1900.

Turpentine—Spirits, 31s. Rosin—Common, 5s.

London, Nov. 9, 1900.

Turpentine—Spirits, 31s. 6d. Rosin—American strained, 5s. 9d.

James Watt & Son furnished the following London turpentine statistics:—

	1900.	1899.	1898.	1897.
Stock, Oct. 27	19,469	8,802	28,415	23,188
Del'd this week	1,367	1,307	1,043	1,192
Since Jan. 1	71,387	78,558	81,274	70,614
	s. d.	s. d.	s. d.	s. d.
Price, Oct. 29	31 7½	36 6	27	23 3
Jan-April	32	37	27 6	23 9

If you are contemplating the purchase of machinery of any kind, and desire to be brought in contact with the different manufacturers, the Oil, Paint and Drug Reporter will be glad to supply full information upon receipt of request.

S. P. SHOTTER COMPANY

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Rosin and Spirits Turpentine

The Largest distributors in the World. The largest distillers of Pine Products in the World.

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INDUSTRIAL SECURITIES.

Reports from the principal trade centers indicate a reaction from the depression caused by an active political campaign, and there is a general feeling of relief that the strife is over and there are no more outside issues to distract the attention of the business community. General trade conditions are satisfactory and there appears to be confidence that they will continue good. In the lines of trade represented by the Reporter an improvement is noted in the movement of chemicals, dyestuffs and oils, but in paints there has been no marked change. Drugs have been rather slow, though an increased business appears to be confidently counted upon for the near future. The industrial situation continues satisfactory, and in some an improvement is claimed, the more notable being the steel and iron industries. In the textiles there appears to be less cause for congratulation and in some quarters there appears to be a fear that there has been greater production than conditions warranted, though others express confidence that stocks will not prove specially burdensome. The fact is, however, that in some cases manufacturers had been over sanguine as to the future, and had made their production too heavy. The labor situation continues to clear, as quite a number of strikes have been adjusted and fewer new ones have been reported than for several months. There is now no very important strike in force, and it is believed that if no new complications arise the end of the year will find the country practically clear of strikes. The great agricultural staples have shown only minor variations and have generally held well up to the prices ruling a week ago, with cotton closing higher. Wheat opened on Monday at 79¼c., but on Wednesday receded to 78⅝c., and on Thursday to 78⅛c., but recovered on Friday and closed at 79c. for December delivery. Corn has ruled unusually steady, the range for the week being 42½@43c., with the close on Friday at 42⅝c. for December delivery. Oats have not varied from 25½c. Cotton sold on Monday up to 9.08c., but on Wednesday showed some weakness, selling down to 8.88c., but recovered later, selling on Friday at 9.24c., and closed at 9.23c. for December delivery. Lard was strong early in the week, but later weakened, and on Friday dropped below 7c. and closed at Chicago at 6.90c. for December delivery. The market for time money has been steady, with the supply somewhat larger, while the demand has been moderate and the volume of business has been fair. Rates at the close were 4½ per cent. for thirty to sixty days, 5 per cent. for ninety days, 5@5¼ per cent. for four to five months, and 5@5½ for longer periods. Money on call at the Stock Exchange has ranged from 1 to 25 per cent., with the bulk of business done at 3@4 per cent. The lower rate was reached on Wednesday only, and the highest on Monday only, while the average was about 6 per cent. The closing rate on Friday was 3½ per cent. Mercantile paper has been quiet during the past week, with the supply moderate and the demand light. Rates at the close were 4½@4¾ per cent. for sixty to ninety days' indorsements, 4½@5 per cent. for choice single names having four to six months to run, and 5½@6 per cent. for other grades. The price of bar silver declined early in the week, but advanced later, and closed on Friday at 63¾@64¾c. per ounce for commercial bars, and 63⅞@65¼c. for Government assay bars, showing a decline of ¾c. from the ruling prices of a week ago. Mexican dollars closed at 50c. bid and 52c. asked. The market for sterling exchange was depressed early in the week, but closed stronger. Rates for actual business at the close were 4.80¾@4.80⅞ for sixty days, 4.84⅝@4.84¾ for demand, and 4.85⅜@4.85½ for cables. The supply of grain and cotton bills has been good, while rates have ruled stronger and the demand was fair. Rates at the close were 4.80@4.81¼. The Industrials have received more attention than they have for a long time, and Sugar and Tobacco have been especially active, while the entire list shows a gain, Tobacco scoring the greater advance. The improvement is attributed to increased confidence in this class of securities. The general list of securities dealt in on the Stock Exchange has been strong and active throughout the week, and especially during the past three days have the transactions been of exceptionally large volume, while there have been substantial advances in many stocks.

Sugar stock was buoyant on Monday and under active trading advanced steadily since Tuesday, although a bear clique succeeded in causing a temporary reaction on Thursday, which some thought presaged a decline. There followed a sharp recovery, however, and on Friday the prices went above 130, with the last sale at 130½.

The fluctuations during the week have been from 124¾@131⅝, the lowest Monday and the highest Friday, closing today at 129⅝ bid.

Cotton Oil stock was traded in to a fair extent and developed strength on reports of a prospective 4 per cent. dividend; but later the announcement came that the directors had declared a dividend on the common of 3½ per cent., and of 3 per cent. on the preferred. While some expressed disappointment, it had no effect on the market, the stock closing at 36⅞. The dividend is payable Dec. 1.

The fluctuations during the week have been from 36@37¼, the lowest Monday and the highest Saturday, closing today at 36⅝ bid.

Lead stock felt the beneficial effects of the advance in the general market, although trading in it was light and there were no reports affecting the concern. The last sale on Friday was at 21¾, the highest of the week.

The fluctuations during the week have been from 19¾@22, the lowest Monday and the highest Saturday, closing today at 21⅞ bid.

Linseed Oil stock was strong early in the week, but declined sharply on Thursday on reports of heavy selling at Chicago. There was a partial recovery on Friday, while the closing sale was at 11¾. There were numerous reports and rumors. Among the more effective used by bear operators was one to the effect that the dividend would be passed owing to the funds being tied up in seed deals. By others it was claimed that the concern was in better condition than ever before.

The fluctuations during the week have been from 10½@13⅛, the lowest Thursday and the highest Wednesday, closing to-day at 12 bid.

Rubber stock advanced steadily under moderate trading, going from 31½ on Monday to 33⅞ on Wednesday; but on Friday the stock receded to 32½, which, however, brought buyers to the fore, and, under fairly active bidding, the stock advanced to 36, with the last sale on Friday at 35¼.

Tobacco stock sold on Monday at 97½, but thereafter the advance was rapid and trading was fairly active. There were few reports about the concern and the improvement was attributed to increased confidence and to the advance in the general market. The last sale on Friday was at 105¾, while the range for the week was 97½@106½.

Leather stock swung into line as one of the more active stocks, and was benefited by the improvement in the general market, and also by reports of active demand for the products of the concern, which was reported as doing a very profitable business. The range for the week was 11¾@14¼, with the last sale on Friday at 13¾.

Standard Oil stock made a new record, sales being reported at 650 on the belief that there would be an increased dividend; but when later the dividend of $10 per share was declared, payable Dec. 15, there was a sharp break, resulting in the stock selling down to 610, though later bids were above that figure.

In the following table are given the closing quotations Friday night. The market review is complete to Saturday's close:

Name.	Amount.	Bid.	Asked.	Last Sale Bonds.
Am. Agc'l Chemical Co	$20,000,000	26	28	
pref. 6%	20,000,000	77½	80	
Am. Alkali Co.	24,000,000	2⅛	2¼	
pref.	6,000,000	—	—	
Am. Chicle Co.	6,000,000	75	80	
pref.	3,000,000	82	88	
Am. Cotton Oil Co.	20,237,100	36⅝	36⅞	
pref.	10,198,600	93	98	
bonds 8% g. 1900	3,068,000	—	—	100—Nov. 9, 1900
Am. Degras Co.	500,000	—	—	
Am. Fisheries Co.	10,000,000	—	—	
pref.	2,000,000	—	—	
Am. Linseed Co.	16,750,000	11⅜	11½	
pref.	16,750,000	51⅞	52	
Am. Smelt & Ref. Co.	32,500,000	45¼	45½	
pref.	32,500,000	93¾	94½	
Am. Soda Fountain Co.	1,250,000	—	8	
pref.	1,250,000	40	50	
2d pref.	1,250,000	7	10	
Am. Spirits Mfg. Co.	28,000,000	2	3	
pref. 5% limit	7,000,000	—	—	
bonds, 6% g. 1915	2,000,000	—	—	66—Nov. 1, 1900
Am. Straw Board Co.	6,000,000	—	—	
Am. Sugar Refining Co.	36,968,000	130½	130½	
pref. 7%	36,968,000	116⅝	118	
Am. Tobacco Co.	17,900,000	105¾	106	
pref. 6%	11,935,000	127	132	
div. scrip 1896	3,762,000	—	—	100—Aug. 31, 1900
Celluloid Co.	3,000,000	95	100	
Chesebrough Mfg. Co.	500,000	355	365	
Continental Tobacco Co.	50,000,000	33	33½	
pref.	50,000,000	85	85½	
Con. Stock & Pet. Ex. Mem.	.....	—	—	$325—Nov. 1, 1900
Diamond Match Co.	14,000,000	123½	124	
Distilling Co. of America	70,000,000	5½	6½	
pref.	55,000,000	21½	23	
Dixon Crucible Co.	.....	—	—	
General Chemical Co.	12,500,000	57	62	
pref. 6%	12,500,000	95	100	
Glucose Sugar Refining Co.	26,000,000	58¼	58½	
pref. 7%	14,000,000	102½	105	
Harrison Bros. Co.	1,000,000	—	—	
pref.	1,500,000	—	—	
bonds 5%, 1924	1,300,000	—	—	
International Pulp Co.	5,000,000	—	—	
Maritime Ex. Mem.	.....	—	—	$40-$55—Mar. 15, 1900
National Lead Co.	14,905,400	21¾	22	
pref. 7%	14,905,400	98	99	
National Starch Co.	4,450,000	—	—	
1st pref. 8%	2,219,400	—	—	
2d pref. 12%	1,346,800	—	—	
1st mort. 6%, 1920	3,837,000	—	—	
National Wall Paper Co.	30,000,000	—	75	
pref. 8%	3,000,000	—	—	
New Jersey Zinc Co.	3,040,000	—	—	
Penn. Salt Mfg. Co.	2,500,000	118	120	
Pittsburgh Plate Glass Co.	9,850,000	168	170	
pref.	150,000	257	—	
P. Lorillard Co.	3,000,000	—	—	
pref.	2,000,000	100	105	
Planters' Compress Co.	.....	15	18	
Procter & Gamble Co.	1,250,000	430	—	
pref.	2,250,000	198	—	
1st mort. bonds	.....	112	113	
Produce Ex. Membership	.....	—	—	$250—May 17, 1900
Quicksilver Mining Co.	5,708,700	1⅝	1⅞	
pref. 7%	4,201,300	8¼	8½	
Royal Baking Powder Co.	10,000,000	—	—	
pref.	10,000,000	93	94	
Southern Cotton Oil Co.	2,000,000	55	55¼	
Standard Oil Co.	110,000,000	635	660	
Stillwell, Bierce & Smith Valle Co.	500,000	—	—	
U. S. Glass	.....	31	32	
pref.	.....	120	—	
U. S. Leather Co.	52,711,100	13¾	14	
pref. 8%	62,111,100	75¼	76	
bonds 6% g.	5,230,000	—	—	
U. S. Playing Card Co.	3,600,000	—	—	
U. S. Printing Co.	3,500,000	—	—	
U. S. Rubber Co.	25,000,000	35½	35¾	
pref.	25,000,000	95	95½	
Union Talc Co.	1,000,000	—	—	
Virginia-Carolina Chem. Co.	12,000,000	—	—	
pref.	12,000,000	—	—	

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CHLORIDE OF MAGNESIUM, ULTRAMARINE, SULPHIDE OF SODIUM.

Practical Mechanical Engineering in the Oil Mill.

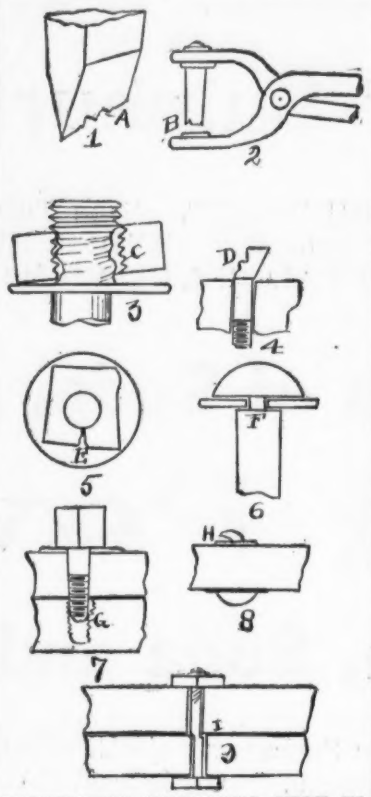
In olden times, when the types of machinery used in oil plants were simple in construction and slow of speed, there was no very great need of expert mechanical engineers to care for and maintain the equipment of an oil mill. In recent years, however, when the greater proportion of the work of the plant is done mechanically, the conditions of machinery and equipment are notably different, and instead of making repairs and adjustments with worn out tools and fittings, we find that it is essential for the mechanics of the establishments to be properly provided with perfect tools and equipped with a good knowledge of the management of oil mill machinery. In passing through some oil handling establishments recently, I observed that some of the tools used in connection with the setting of the machinery were in exceedingly poor condition. In one place the machinist had some cold chisels and in nearly every instance these chisels were in the condition shown in figure I. The edges of the chisels were broken and worn. This sort of a tool when applied to a modern machine, on which the bearings are of delicate make, the gears light and free of action, the general mechanical motion in accordance to recent planning, will surely cause trouble. Some of the old types of oil manufacturing machinery, in which many of the motions were effected by hand, might well have been adjusted with the crow bar and wood mallet. But the modern machinery in which the motions are accomplished mechanically and in which there are numerous devices and attachments for performing the work, require proper tools and appropriate use of same.

If a chisel is used with the edge of it in the condition shown at figure I this edge will badly score whatever metal of machinery comes into contact with it. It will pay the machinist of the oil manufacturing plant to equip himself with the proper assortment of tools. He should have both hard and soft hammers, otherwise the hard hammers will be used on brass and other fittings of machinery and will ruin the same. He should have a good set of taps and dies, plenty of pipe bending tools, for it is in the oil mill of recent design that such things are essential for success. The machinist of the oil manufacturing establishment should also be well supplied with tools necessary to care for the belting of the mill. In oil mills there are a number of high speeded machines depending to a considerable extent upon the condition of the driving mechanism for success. If the belting is in any way defective or out of order through lack of tightening or splicing, then there will be irregular production and loss of time. Once I saw that the entire belting outfit of a very good oil working plant was in bad shape simply because of the condition of the belts. The belts were wabbling about and were too loose. The unions were in bad shape and upon examining the same I found that the trouble was due to the use of a bad punch. I then saw the punch and figure 2 shows the shape it was in. The cutter was worn at the cutting end and instead of making a clean hole in the leather, simply, punches in the shape shown in this figure should be reground or the punching portion should be replaced with new. It will pay to have a full set of punches, and all should be kept in good order and sharp.

Often the nuts of oil machines get into the shape shown in figure 3, due to the threads at crusting out or ripping off. Careless handling of the wrench on the nut may have caused the stripping of the threads, in which case the only remedy is to recut the threads a size smaller and then use a smaller nut. If possible a new bolt should be employed. Nuts in the condition presented should be avoided as much as possible, for they are liable to produce trouble by permitting the parts of the machinery to slip out of position. Often the thread work of nuts is destroyed by mechanical action which cannot be avoided except by the addition of more bolts.

In passing through oil mills in which there is much machinery in operation, there will be seen numbers of screws with the sides of the heads broken off as at figure 3. As soon as this happens, the screws are useless and should be substituted with new. Ordinarily the sides of the slots of screws are broken off in the way shown by using too much pressure on the screw driver. The employment of a screw driver too heavy for the screw or the use of a hammer or wrench on the head of a screw, as some do, will usually break off the side of the head.

Split nuts are also common in oil mill machinery due to the expanding of the nut by screwing towards the base. Often nuts crack through the exertion brought on by pressure from expanding parts which are clasped. The writer has in mind several instances in which nuts cracked after adjustment simply because of the interior pressure brought about by an excessively loaded tank or cylinder. Then again some of the nuts will get out of condition as a result of rusting of the threads. Oily matters will also often act like an acid on some of the metals and eat away the thread work and ruin the parts. The



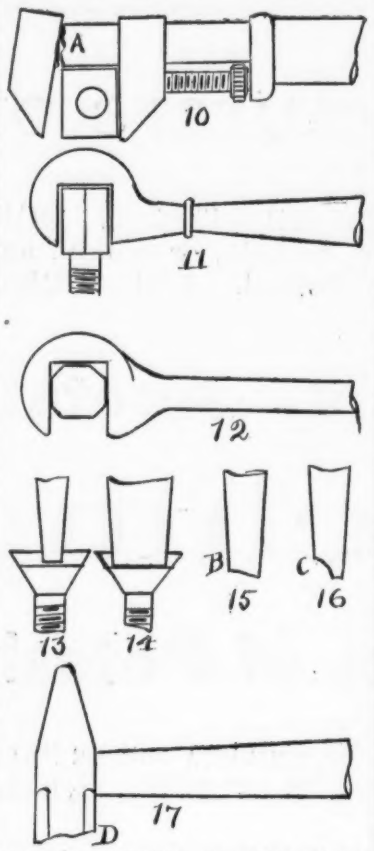
ILLUSTRATING MECHANICAL WORK IN OIL MANUFACTURING PLANTS.

remedy in each case is of course to supply new nuts and reset threads on the bolt if required. The writer has often found weak connections in bolts and rivets in oil tanks and other important parts of the equipment of the mill and these weak parts seldom fail to give trouble in time. In figure 6 is a common occurrence in which the washer of the nut is made to fit into the shoulder of the bolt by cutting away some of the metal, making a sort of flange device. This idea of removing the metal of course weakens the bolt and should not be permitted, especially in oil tanks that are required to carry considerable oil. Then again in figure 7 is shown an instance often seen in connection with both oil tanks and oil working machinery.

The idea of the set bolt is to secure the two pieces of sheet metal together as shown, and one piece of the metal is bored straight through, while the other is provided with the necessary cut threads. Instead of turning the set screw deep into these threads as intended, the set screw only fits into the opening, with the result that but few threads at g form the gripping portion, and the least strain is liable to pull these out.

Another defective connection often seen in connection with oil retorts and machinery is presented in figure 8, in which the rivet h, instead of being properly headed and flanged so as to make a secure gripping at that point, is merely doubled over, and this hooked portion is likely to pull off under the least strain. This sort of mechanical work in oil mills is what creates wastage of product and increases the cost of manufacture. In cases of the kind shown, the remedy is to cut the bent portion off near the head, and then flange the same with a good shoulder, so as to make a firm hold. Then in figure 9 is another instance of poor workmanship that costs oil manufacturers considerable money in the course of the year. It is where slender bolts are employed to hold together comparatively heavy sheet metal. The chances are that the working of the sheets of metal will cut into the little bolt at i, and in a short while the connection will be so weakened that it will separate. The best way is to use good sized bolts and have the metal plates so firmly set together that one cannot form a cutting edge with the other by working to one side as shown.

In figure 10 at a is shown a familiar sight in oil mills, due to careless workmanship. If the machinist puts a wrench of light proportions on a heavy nut and attempts to turn the same, and the latter is stuck through rusting, the chances are that the wrench will be broken at the point indicated. This trouble may be overcome by supplying the machinists with good and substantial wrenches of sufficient size and strength to resist the exertion of turning the large nuts usually met with on the large oil tanks, oil pumping and conveying machinery and usual fit-



ON THE HANDLING OF TOOLS IN OIL WORKING PLANTS.

tings of the modern oil-working establishment. Then there are wrenches used in some of the machinery departments of oil plants that are unfit for the service intended. One of these wrenches is shown in Fig. II. The maker of the wrench never intended that it should be used in a vertical position on large set screw heads as shown, for when used in this way the jaws are bound to spring. The makers of this form of wrench calculated that it would be used flat and when used thus it will do the work right without springing. I have seen careless workmen in oil mills use these wrenches carelessly and break them or otherwise put them out of service. Then there is the ordinary flat wrench in Fig. 12, which is often used incorrectly. The position in which it is shown is correct, and when applied in this way will take hold of the head of the set screw or the nut with firmness. But often the size of the wrench is too small and the jaw fails to fit well, or if too large, will spring out of shape and cause trouble. The best way to prevent trouble in the use of these wrenches is to have an assortment of from three to five wrenches of each kind for use in handling the nuts and the set screws of the pipes, the tankage and the pumping and conveying and other machinery of the up-to-date oil manufactory. With the proper outfit of wrenches there is not much chance for the mechanic or workman to use wrenches that fail to fit properly.

The sets of screw drivers employed in the mechanical department of the modern oil mill are worthy of note. In Figs. 13 to 16 some suggestions are given. Small bladed screw drivers are essential to the equipment of tools for the oil mill machinist, but he should avoid using a narrow bladed screw driver in a wide screw slot as in Fig. 13. This seems strange to illustrate, for one would suppose that the ordinary machinist of the oil or other mill would not do anything like this with his tools. But machinists and engineers often get careless and they try to make a small tool do where a larger one ought to be used for the purpose of saving the trouble of going after the right tool. If the little screw driver is at hand and no large one, the chances are that the little one will be employed with the result that the end of the blade is wrenched and dulled and perhaps chipped while the slot in the screw will probably be broken or otherwise ruined.

It is best, therefore, for the proprietor of the mill to see to it that the tool chests of the machine shop and the engine room are properly provided with full sets of screw drivers of different widths. It can be seen by comparison that by using a wider blade in the slot as in Fig. 14 the chances for manipulating the screw without damage to the end of the screw driver blade or the slot of the screw are increased.

Then there are the broken and generally imperfect screw drivers so often seen on the benches of the machine shop of the oil manufactory. In Fig. 15 is the dulled sort, the edge at b having been worked down by constant use. This bad place can be ground off to a common level and the blade sharpened so as to be nearly as good as new. Then at c, Fig. 16, is the sort of fracture that results from a piece of the steel being chipped off. When screw driver blades get into this condition, good grinding is necessary in order to bring the end out correctly, and usually it cannot be done without drawing the temper from the steel, afterwards restoring it. If the break is not very bad, then ordinary grinding and sharpening will do.

If one goes into the mechanical department of an oil mill, he is pretty sure to find several of the important hammers with the faces in the condition shown at d Fig. 17. This ought not to be permitted. Every time that a hammer in this shape is used on the machinery or the metal tanks or pipes of the plant, defective places are caused. The hammers in this condition may be partly restored to former shape by hard grinding on an emery wheel. The worn and chipped portion is thus removed, and this, of course, makes the hammer more stubby and lighter, but it is in far better shape for use than when it was worn and uneven. It will pay to throw away hammers that are chipped and worn and replace them with new ones. The up-to-date equipments of the modern oil plant will not permit the use of worn out and defective tools, and the only way out of it is to keep up the mechanical department to a high standard.

(Special Correspondence to the Reporter.)

Returns to Internal Revenue Bureau.

Washington, Nov. 9, 1900.

The Commissioner of Internal Revenue has made a ruling calculated to relieve manufacturers of certain classes of products, oil refiners, and others who are obliged to make returns to the Internal Revenue Bureau, of their liability to pay heavy penalties for failure to make such prior to the close of the fiscal year or of the month in which the liability began. It has been found that in many cases parties have not been aware of their liability to pay a tax or to make return, but have begun correspondence either with the Internal Revenue Bureau or the local district officials prior to the close of the month or tax year with the view to ascertaining the facts as to their obligations. In a number of instances the month or year has expired pending the decision of the officials as to the liability to tax, and following the letter of the law, a penalty of 50 per cent. of the entire amount has been levied. The Commissioner now holds that where good faith is shown under such conditions as those described, the penalty will be remitted. This ruling is set forth in the following letter to a New England collector:—

"In reply to your letter you are informed that where a party liable to a special tax addresses a letter to you which is received by you before the close of the calendar month in which the liability began, and discloses the character of the business in which he is engaged, you should accept the special tax without the 50 per cent. penalty. This rule will hold good where a taxpayer discloses to the deputy collector of his division the character of the business in which he is engaged and asks for blanks on which to make a return, notwithstanding the fact that there may not be time enough for you or your deputy collector to visit the taxpayer and present a return, as provided for by section 3173 Revised Statutes.

"In all cases where taxpayers disclose their liability, either verbally or in writing, to a collector or a deputy collector, such officers should see that the taxpayer is supplied with a return, or prepare a return for him, as provided in section 3173, Revised Statutes.

"No penalty accrues where parties consent to disclose their liabilities to special tax within the calendar month."

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(Special Correspondence to the Reporter.)

Chicago Seed and Oil Market.

Chicago, Nov. 8, 1900.

The decrease in flax receipts in the Northwest, as compared with a week ago, will afford relief to the railroads, which have been threatened with car famine and blockade. Sounds funny, doesn't it? A car famine in a country where the crops were reported by pessimists to have been nearly destroyed! Yet the same country has enjoyed in the last two weeks the greatest movement of flax in history, 5,215 cars, equal 209 freight trains of 25 cars each for flax alone. To begin with, it is admitted that the receipts to date are considerably below those of last year for the same period. This is due to the fact that the movement of the crop was set back 30 days this year by wet weather preventing threshing. The heavy movement in the Northwestern crop started Oct. 18 this year, as the record of receipts shows. Last year it began Sept. 19. Is it reasonable to expect that between Oct. 18 and Nov. 1 the same amount of flax should come forward as came forward from Sept. 19 to Nov. 1 of last year—a period of 14 days as compared with 44? Yet this is exactly what the pessimists are basing their ideas on. Give the crop a fair chance. The actual movement up to Nov. 1, excluding duplications, has been:—

	Aug. 1 to Sept. 30, 1900.	M'th of Oct., 1900.	Total to Nov. 1, 1900.	Total to same date, '99.
Chicago..	1,890,000	934,500	2,824,500	3,020,064
Duluth...	891,351	2,029,731	2,921,082	5,787,306
Min'polis, less shipments..	595,120	977,570	1,572,690	2,019,630
St. Louis	256,910	122,000	378,910	265,685
Direct to interior mills..	400,000	200,000	600,000	600,000
Totals.	4,033,381	4,263,801	8,297,182	11,692,885

The only duplications so far on this crop have been the shipments from Minneapolis. These are all dropped from the reckoning, regardless of where the seed has gone, so if any error is made it is in favor of the pessimists. Up to Nov. 1 there was a decrease of 4,000 bushels in receipts, as compared with the corresponding period of last year. Of this loss Duluth is responsible for 3,500,000 and Minneapolis for 500,000. The point that failed is Duluth. As we have stated, the movement did not become heavy at Duluth until Oct. 18 this year, as against Sept. 19 last year. The movement from Sept. 19 to Dec. 1, 1899, was 7,855 cars. Duluth to catch up with last season's record must therefore have 7,855 cars between Oct. 18 and Dec. 1 this year, or an average of 179 cars a day. From Oct. 18 to Oct. 31 the average was 208 cars. We are thus 406 cars ahead of the required average at the beginning of November, which reduces the average required for that month to 167 cars daily, as compared with a daily average of 57 cars in November, 1899. The details for the crop movement at Duluth for the two years follow:—

DULUTH RECEIPTS COMPARED.

	1900.	1899.
August	61	130
September	1,137	1,986
October	3,560	5,407
November	...	2,259
Total, 4 months, 1899		9,782
Total, 3 months, 1900		4,758
Required for November, 1900		5,024
Daily average required for November		167

Carrying the problem into November we have receipts the first seven days of the month at Duluth of 1,091 cars, a daily average of 156, which leaves the average for the remaining days of the month at 171 cars. Any excess of this average will show a surplus in the Duluth movement over that of last year. The crop of 1899 was 20,383,000 bushels, with all duplications omitted. The flax States outside of North Dakota have a surplus over last year's crop, and it is now up to North Dakota. Should that State merely hold its own, the crop will be larger than that of 1899. Should North Dakota increase her crop over that of a year ago there would be a corresponding addition to the already increased present crop. Even should North Dakota fall behind in her averages for November, there need be no cause for alarm. Minneapolis and Chicago can easily make up the deficit after the season at Duluth closes. Furthermore, it is generally conceded that part of the crop will be caught in stack and may not reach market till spring. The recent favorable weather in the Northwest has considerably reduced this amount from what had previously been expected, yet some will necessarily be caught and the spring receipts increased by the amount so delayed. The present receipts indicate that the pessimist will not have to wait till spring before he has had the small crop ideas knocked out of him—before he has learned the difference between a small crop and a big one that was delayed for a time by the inability of the farmer to get it threshed. Chicago will require receipts of 69 cars a day this month to make the total up to Dec. 1 equal that of last year to some date. In November, 1899, Chicago's daily average was 38 cars. The comparative receipts for the two years have been:—

CHICAGO RECEIPTS COMPARED.

	1900.	1899.
August	1,501	999
September	1,019	1,971
October	1,246	1,711
November	...	1,150
Total, 4 months, 1899		5,831
Total, 3 months, 1900		3,766
Required for November, 1900		2,065
Daily average required for November		69

The receipts at Minneapolis cannot be judged from the car standpoint, for the reason that the car receipts at that point include cars billed through to Duluth, though these do not figure in the Minneapolis bushel receipts. The St. Louis receipts have shown no important change and are not taken into the calculation. A large shipper from Allen county, Kansas, who was in Chicago last week, stated that the Southwestern crop is now practically all marketed. He confirms the statement recently made in these columns as to the reasons for the delay in forwarding the last half of the Southwestern crop, viz.: that after the first rush to sell, and when prices had declined farmers held off for higher prices. Rains prevented their shipping when the higher prices came, but at the earliest possible moment they got their seed to market and the crop is now out of the hands of farmers and shippers except for small and scattered lots. The foreign situation shows still greater strength than heretofore. Calcutta seed is quoted at 63 shillings up to Jan. 1 for December, and new crop at 50s. 6d. shows quite an advance and that foreigners are gradually advancing their ideas for the futures. New crop Argentine, December-January, is quoted 54s. 6d., making an advance all around. The Argentine reports indicate a greater damage to flax than to wheat. In the United States the reverse is true, and any reports showing Argentine flax to have suffered more from the weather than wheat may well be looked upon with suspicion. Yet it is well to remember that in years past the Argentine crop has always been interfered with by weather conditions. Should the present reports be confirmed it is probable the Argentine crop will not be large enough to very materially influence prices. That country only can influence the markets by raising a big surplus. Foreigners do not seem to have given up the idea that the new crops from Argentina and India will be sufficiently large to warrant the belief that they will be marketed at lower prices than are now prevailing. This is really a better indication of what we may expect from the new crops than any judgment based on the weather reports. Prices closed practically unchanged from the week's opening figures, though meantime there was a good advance, due to a better demand and limited offerings. Toward the close there were freer offerings on continued good receipts, both here and at the Northwest, and prices declined, despite more of a disposition to trade, due to a greater desire on the part of crushers to secure supplies. The West and Northwest have had an exceptionally open fall season and it would cause no surprise should December set in with severe cold, which would for a time further check the demand for oil. January, February and March are slow months. As soon as the production allows accumulation crushers will not be in the market for seed at present prices and values may go off rapidly, especially if large interests take the short side of the market. The week's price summary reads:—

	November					Nov. 7,
	1.	2.	3.	5.	7.	1899.
N. W.	177	181	180	180	177½	129
No. 1.	176	180	178½	179	176	129
Nov.	175	180	178½	179	175	127
Dec.	174	176	176	178	175	128¼
May	175	176	176	179	174	129¼

Trading was very light all week, the 50,000 that changed hands the closing day being the largest transactions of any one day in the week. Crushers were more in evidence on the declines and had no difficulty in getting supplies at lower prices than had ruled the previous days. The sales:—

Nov.	Cash.	Bulk of sales at—	Rej.	Bulk of sales at—
1.	8,250	$1.77	3,750	$1.65@1.68
2.	8,250	1.81@1.83	750	1.77
3.	6,000	1.80@1.81	750	1.71
5.	4,500	1.79@1.80	6,000	1.73
7.	3,750	1.76@1.78	7,500	1.68@1.72

Nov.	Nov.	Bulk of sales at—	Dec.	Bulk of sales at—
1.	1,000	$1.76	5,000	$1.74
2.	15,000	1.81	6,000	1.77½
3.	1,000	1.78½	5,000	1.76
5.	6,000	1.79	6,000	1.78
7.	15,000	1.75@1.78	10,000	1.75@1.78

	May.	Bulk of sales at—
Nov. 1.	1,000	$1.70
Nov. 2.	....	...
Nov. 3.	....	...
Nov. 5.	6,000	1.77
Nov. 7.	19,000	1.75@1.78

The receipts for the week may be regarded as liberal, considering rains were general last week from the Gulf of Mexico to Manitoba. The political campaign also may have had some influence. In the Southwest the flax at the stations is getting pretty well thinned out, which naturally affects receipts at Chicago. Despite these unfavorable conditions, the receipts for the week are slightly larger than for the corresponding week last year, as shown in the following table:—

	N.W.	No.1.	Rej.	No g'de.	Non-Insp.	T'tal 1900.	T'tal 1899.
Nov. 1.	11	33	11	10	..	65	60
Nov. 2.	7	20	11	3	..	41	23
Nov. 3.	7	10	23	2	..	42	42
Nov. 4.	..	..	..	..	..	..	39
Nov. 5.	3	20	48	6	13	90	..
Nov. 6.	..	..	..	..	..	..	74
Nov. 7.	2	12	38	3	..	55	49
Total.	30	95	131	24	13	293	287
Ttl on cp.	1,238	1,950	714	130	18	4,050	4,967

There is every reason to believe that the non-inspected receipts will figure more extensively in the future. These are Minneapolis cars consigned direct to certain mills in Chicago, with a few cars for Ohio mills. Shipments were fairly large, almost entirely by lake, three cargoes going east that way. They were mainly confined to No. 1 seed, there being no large quantity of No. 1 Northwestern available. The record reads:—

	N. W.	No. 1.	Non-Insp.
November 1.	....	63,400	....
November 2.	532	63,001	24,547
November 3.	650	4,071	7,410
November 4.	....	....	....
November 5.	584	4,167	1,375
November 6.	....	....	....
November 7.	....	81,722	1,525
Total	1,766	216,361	34,857

	Total 1900.	Including by lake.	Total 1899.
November 1.	63,400	63,400	5,945
November 2.	88,080	63,533	25,131
November 3.	12,131	....	2,299
November 4.	....	....	24,141
November 5.	6,126	....	....
November 6.	....	....	33,780
November 7.	83,247	79,991	27,236
Total	252,984	206,924	118,532

In-store stocks are again reduced, two-thirds of last week's stock disappearing. Stocks Nov. 3 were 240,000 bushels below those of the corresponding period last year, as shown below:—

1900.	N. W.	No. 1.	Rej.	No gde.	Total.
Nov. 3.	2,798	25,999	....	....	28,797
Oct. 27.	2,798	84,474	....	....	87,272
Decrease.	....	58,475	....	....	58,475
1899.					
Nov. 4.	156,708	100,691	9,702	1,544	268,645
Oct. 28.	79,468	90,140	5,456	1,544	176,608
Increase.	77,240	10,551	4,246	....	92,037

The total visible is a million bushels under the stocks of last year, the figures for the three markets, taking no account of the unknown stocks in private store, being:—

	Nov. 3, 1900.	Nov. 4, 1899.
Chicago	28,797	268,645
Duluth	1,513,879	2,223,000
Minneapolis	204,413	333,000
Totals	1,747,089	2,824,645

DULUTH.—Prices showed an advancing tendency this week until the extreme close, when there was a big break, carrying prices down 8½c. for cash and November, 5½c. for December, and 7½c. for May. Liberal offerings tell the story. According to the transactions the price seemed to have been above the views of buyers and there was a noticeable falling off in the demand on the advances, which would suggest that shorts, if there are any, were less nervous. The demand was apparently limited to crushing needs and rejected was freely traded in at prices varying according to quality of sample. The range of closing prices was:—

	November				
	1.	2.	3.	5.	7.
Cash	181	183	185½	185½	177
To arrive	181	183	184½	184½	177
November	180	182	183½	184½	177
December	175	176	177	177	171½
May	177½	178	179½	179½	172

Duluth this week received 1,091 cars and Minneapolis 442, about one-half the receipts of the previous week at the two points, and a little below the aggregate received at the two points two weeks ago. The weather was a contributing cause in checking receipts, rains having been general the previous week. The instore at Duluth increased 740,807 bushels and is 1,513,874. Minneapolis increased 36,829, and has 204,413 bushels on hand.

LINSEED OIL.—The situation in linseed oil is strong because of the small supply. This is the local view of the oil question. It is quite evident the old stocks of oil, large though they were, are nearly exhausted, and the amount of new oil made this season is less than was made last year during the same period, for the very good reason that the supply of seed up to Nov. 1 this year has been 2,700,000 bushels less than for the corresponding time a year ago. The stock of available seed having been reduced it follows that the oil output has been cut down. If reckoned on the seed basis the decline in oil output would equal 6,750,000 gallons. Heavy stocks were brought forward from last season, so the old saying holds true that when it is all gone there is plenty left. With a great many buyers it is just now a question of immediate supply, and the size of the delayed flax crop cannot enter into their calculations. Under ordinary conditions one could look for an easing off in oil prices in December, and a decline usually takes place in that month, but when one considers that immediate supplies of seed have been very much reduced by weather conditions it is easy to understand how it is possible to successfully carry the present prices of oil through December. Yet it really looks as though the price was getting a little top heavy and a decline in December would surprise no one. The seed, being damaged, is not available for foreign consumption and in all likelihood will be used at home. There is an abundance of such seed. The price of oil for the week is unchanged at 72c. for raw in car lots, Chicago. The demand is fair and steady.

LINSEED CAKE.—The linseed cake market is dull, exporters being unwilling to execute cable orders at the prices offered. There has been considerable inquiry from the Continent for January - February and February - March shipment from seaboard at 50c. to $1 under our price, which is nominally $26.50 f. o. b. Chicago. The U. K. markets are quiet and there has been little inquiry from that quarter. The situation may therefore be summed up in the statement that the market is firm, but the transactions very few. Open weather abroad has undoubtedly kept buyers out of the market, but it is reasonable to suppose that cold weather will soon make its appearance, and if so it should stimulate liberal orders, as supplies are conceded to be very meager. Ocean freights continue to show a lower tendency.

CORN OIL.—Corn oil is firmly held at 6½c., the price for some weeks past. Free sales have been made on this basis in the domestic market the past week. There is also a demand from abroad, but at lower prices than now rule. The domestic market is taking full 75 per cent. of the total output at present. Corn oil cake is in the same position as in previous weeks—mills oversold and nothing offering.

LARD.—Prices moved within a narrow range. The world's stocks are an argument for higher prices, but it is understood packers are anxious to get their hogs for their winter packing at low prices and will, therefore, not support any bull movement in product. Shipments for the week were 24,000 tierces and exports 34,000.

LARD OIL.—The situation as to lard oil is a little peculiar. Four or five concerns that formerly made this product either are not now making or are out of the business altogether. The few concerns that are now making lard oil are sold up. It is a question if one could buy 100 barrels for immediate delivery. Extra winter strained is quotable at 57@58c.; No. 1, 37c., and No. 2, 35c. Extra No. 1 varies so with different makers as to make it difficult to quote.

STEARINES.—At the close the nominal market for oleo stearine was 6¾c., though most packers are inclined to hold for 7c. There are a few inquiries in the market, but generally at ¼c. below the asked price. Sales are only in a small way and the anxiety of sellers is a weakening feature. It looks probable that with continued light inquiry and increasing accumulations the market would have to go lower. Tallow

stearine is quotable at 5¼@5⅝c. and yellow grease stearine at 4½@4⅝c.

TALLOW.—This market showed a slight improvement and at the close there were a number of inquiries, but generally from outside soapers who are not as a rule willing to pay the asked price. Larger buyers are out of the market until sellers make concessions. Speculators still have some stock, but are not saying much about it. Edible is 5⅝@5½c., with packers claiming bids of 5⅝c. Prime packers sold at 5c. and city renderers ⅛c. higher at 4⅝@4¾c. and prime country nominally 4¾c. No. 1, 4⅝c., and No. 2, 4¼c.

GREASES.—The grease market was more active. Several buyers were in the market and they seem to be taking about all the stock that is offered. A white, 4¾c.; B white, ⅛c. higher at 4⅞c. For choice yellow 4c. is freely bid, and 3⅞c. is bid for brown. House grease nominally 4c. and bone 4½c.

The Chemistry of the Japanese Petroleums.*

BY PROFESSOR SHIN-ICHI TAKANO.

The discovery of petroleum in Japan is said to date from the era of Tenchi, Emperor 674 A. D. Several samples were offered to His Majesty, with the names of "burning water" for crude oil, and "burning earth" for asphalt. Since this time the name of "burning wind" has signified natural gas. But no trustworthy information of the first practical use can be traced beyond 1613, when a man by the name of Magara found oil in the town of Niitsu, Echigo Province, started experiments in a refinery at his own expense, and began to distill the crude oil in a small kettle of about 20 gallons in capacity. This was made of cast iron, and used for burning purposes in the district.

Between 1835 and 1865 very little if any improvement was made in either drilling or refining.

Then men began to dig for oil, and, by absorbing it with cloth, or leaves of a plant like the fern, collected it in pails. The bulk of this petroleum was used in the crude state for lighting purposes by putting it into a bottle with a narrow neck, through which a cotton wick was passed.

In 1866 considerable activity was apparent in digging wells, as well as in refining crude, and about fifteen districts were known at this time. The first oil company was organized in Tokio in 1872, and considerable sums were spent for both producing and refining, without success. This compelled the company in 1880 to dissolve, after eight years' struggle.

In 1876 Dr. B. S. Lyman, of Philadelphia, was appointed as chief geologist in Japan.

After making a preliminary geological survey, many places were selected for putting down oil wells for the purpose of investigating and ascertaining the geological formation of the district, and the true oil-bearing rocks and extent of the oil vein. After three years of careful surveying Dr. Lyman made a report on the old field, which was accompanied by several geological maps.

In 1886 the Japan Oil Company was formed in Amaze, Echigo Province, with a capital of $250,000.

This company with its progressive ideas set old-fashioned drilling aside entirely and introduced the American method. It was at this time that two drillers, one from Texas and the other from Marietta, Ohio, were brought over by the company. Prior to this company not a few experiments were made in connection with American drilling in the province of Totomi, one of the oil fields of Japan in the south, and Shinano, the central oil district, but for one reason or another they were not attended with success.

The Japan Oil Company is the first and the largest organization in the petroleum industry ever started in Japan, and the business has been conducted successfully from the outset. The Japan Oil Company started their first trial in the Amaze oil field, where they are located.

Previous to 1890 almost all the oil wells were put down by the company on the sea coast, but many wells were sunk in the sea, with the belief that there was a rich oil deposit underneath. The experiment was very successful; many flowing wells were struck, to their great surprise, producing several hundred barrels of crude oil per well daily. A few quite sensational incidents of flowing wells are recorded. The depth of the sea where the wells were put down was from 15 to 20 feet. This was filled in by stones and debris, and the derrick was placed on the top and a drive pipe used until the rock was reached. One such well sunk in this manner involved a total cost of about $5,000, in addition to $2,000 for the foundation works in the sea.

The greatest excitement prevailed in Amaze in May, 1891, when one of the wells reached a depth of 700 feet, and a colossal column of petroleum rose twice as high as the derrick and broke into a huge shower over its surroundings. Many trenches were dug on the sea coast for saving the oil.

The organization of the Japan Oil Company and other minor ones, with their continuous success in the Amaze oil field, caused great excitement over all the oil fields of Japan, where the odor of petroleum on the ground was discovered, and several hundred oil wells were put down in the hills, valleys and mountains.

This gave rise to the great discovery of the Nagaoka oil field, one of the largest oil fields of Japan.

THE OLD METHOD USED.

Instead of introducing American oil tools for drilling, as was done by the Amaze people, the Nagaoka producers employed their old method of "shafting" drilling, together with "kazusabori," or a kind of artesian well boring, as it was too expensive to introduce the new drilling method. Their experiments came out very successfully. In 1893 one of the largest wells put down by the shafting method was struck in Nagaoka oil field at a depth of 540 feet, in the district of Katsubo. The force of the flowing oil was so strong and so sudden that in a few moments after oil was struck the well was filled with viscous fluid right up to the top, which was four feet square.

The man with a heavy pick on the bottom of the dell was drowned, and his body was not recovered until three years later, when the production decreased and the well was cleaned out.

AMERICAN TOOLS INTRODUCED.

In 1894 the Nagaoka people sent for drilling tools and machinery to the United States, and a visitor will now notice more than three hundred derricks standing near to each other in this oil field, in addition to those sunk by the "shafting" and "artesian" methods.

PIPE LINE COMPANIES STARTED.

In this year the Nagaoka and Zawo pipe line companies were started in the Nagaoka field with a two-inch line each, and a length of about five and seven miles respectively. Prior to these enterprises the oil was carried by coolies, and even by women and children, at a cost of ten cents per ten gallons, irrespective of the distance and the weather.

The daily production of petroleum in this oil field increased from nearly a hundred to a couple of thousand barrels in three years, and the number of refineries from two to thirty thousand during this period.

Between 1895 and 1897, the Japan and the Zawo oil companies put the whole charge of oil exploring in my hands, soon after my graduation in the Geological Department, Imperial University, Tokio.

SYSTEMATIC INVESTIGATION.

This was the first time that any geologist had been engaged in the oil field since Dr. Lyman made his investigations, though, of course, a portion of the oil field was explored once in a while by the Geological Survey, Tokio, as seen by the report of Dr. Nakashima. In 1887 the Government sent out special commissioners to the United States and Russia. These included the Hon. H. Naito, president of the Japan Oil Company; Messrs. T. Mishima, vice-president of the Zawo Company; S. Takano, a geologist, and T. Hirose, a mechanical engineer.

After visiting nearly all of the oil fields of the world they put their whole energy into improving the methods of drilling, refining and transportation.

As a result of the enterprise shown there came another epoch, that of discovery of one of the largest oil fields in Japan, which marked the third era in the history of the Japanese oil industry.

From the latter part of 1897 the Japan Oil Company began drilling in a new direction, at a place named Nagamine, about 15 miles southwest of Amaze, where natural exposures of gas and oil were found. The first well was put down on the American system on a small scale by the Japan Oil Company. On January 12, 1899, the well reached a depth of 540 feet, after working for not more than ten days. Then a tremendous pressure of gas escaped, which caused the well to produce 100 barrels daily. This took place unexpectedly, and a pipe line, having a length of 9,500 feet, was instantly laid down between the well and the Miyagawa tank station, from where the oil is shipped to Amaze to be refined. Soon after the first strike, not only the Japan Oil Company put down as many wells as they could, but also all the chief companies of Nagaoka leased the surrounding land, and several hundred new companies started, following the example of the Japan Oil Company. As a result of this discovery the latter company had to extend their pipe lines in two directions, one from Miyagawa to Amaze, and the other from Nagamine to Kashi-Wazaki, a distance of nearly 8 miles to 9½ miles respectively.

In the middle of 1899 Mr. Ishizaka, one of the champions of the oil industry in Japan, leased several thousand acres of land in the vicinity of Nagamine, at a place called Kamada, and put down his first well. To the great surprise of every one oil was found in abundance, and it was considered the largest well ever known in the history of Japanese petroleum. The Zawo, Hoden and more than thirty new companies started drilling, and each was so well rewarded that the total production of the two new oil fields, Nagamine and Kamada, amounted to over 800,000 barrels in 1899, and more pipe lines were laid down to all directions. More than thirty new refineries were also started in the vicinity. The new oil fields are considered the centre of the oil industry of Japan at present, as the numbers of new derricks are rapidly increasing, as well as the daily production of oil.

In short, oil fields are found almost throughout the entire country, namely, at Hokkaido, Ugo, Echigo, Gumna, Shizuoka, Shinano, Kumamote and Formosa, more than 90 per cent. of the total production of petroleum, however, being produced in the province of Echigo.

THE GEOGRAPHICAL DISTRIBUTION.

As it has been already pointed out, the chief oil field lies in the province of Echigo, in the northern part of Japan, but to show the general distribution of the oil vein it is necessary to give a brief sketch of the geographical classification.

The Japanese oil fields may be classifie d mainly with the provinces in which they are found, namely:—Hokkaido oil fields, Nemuro, Hitaka, Ishikari, Eburi, Toshima.

The Hokkaido Field.—The name Hokkaido signifies Northern Island, which is in the most primitive condition in every way. It is in this island that several hundred Ainus, the remaining descendants of the early natives, are under the protection of the Government, as are the native Indians of the United States. The oil fields are scattered over the provinces described, and in some places crude of very fine quality for burning purposes is found.

No further experiments in exploring have, however, been done except in two places, where drilling is carried out in a very primitive style. The field covers more than several thousand acres.

The Mutsu Field.—This field is located in the northern extremity of Honshyu, or the main island, and is separated from Hokkaido by a channel of about eighty miles in width. Though the natural exposure is found in different places, it is not worked out yet, owing to the soft formation of rocks, which are hard to drill, and the inferior quality of oil both for burning as well as for lubricating.

The Ugo Field.—This oil field is apparently an extension of the Mutsu oil field. The entire field is found along the Japan sea coast, extending about seventy miles with a width of fifteen miles.

Petroleum is found in different places, especially in Nigorikawa, Izumi and the Oguni districts, all of which yield a dark, heavy oil, but the total annual production is not more than several hundred barrels. Drilling is done by the artesian method. Asphalt is also found with the oil.

The Uzen Field.—This field is located next to the Ugo in the south. Though there are many places in the sea where petroleum and natural gas escape, no trial has yet been attempted.

The Echigo Field.—This with the two following forms the main oil field of Japan at the present time. The province of Echigo is situated in the northern part of the main island, about 200 miles north of the capital, Tokio.

The province is a very narrow extension of land of about 250 long by 75 miles in width, running along the entire length of the Japan Sea on the northwest. Oil is found mostly in the central part, though the natural exposures are scattered throughout the whole of the province. This comprises the most prosperous oil fields, as well as the center of the industry in Japan. A description of this oil field will be given in detail in the following chapter.

The Shinano Field.—To the southwest of Echigo oil field the Shinano oil field begins. Through yielding an inferior quality of petroleum and in less quantity, it is very clear that the oil vein is a continuation of the Echigo province, and although there are many natural exposures of oil, very few wells are worked which give twenty to thirty barrels per well a day. They are all shallow wells of from 80 to 200 feet. Several companies have recently been organized to exploit the oil known to exist there.

The Totomi Field.—This is the most southern oil field in Japan, and has been working for more than twelve years. Unlike the preceding oil fields, this is located on the Pacific coast, and there is no connecting oil vein between it and the Shinano oil field at all.

From the point of view of production and quality this is, at present, the second important oil field. Many oil districts are found in the province, but the principal one is Sagara, where drilling on the American system was first tried, although the enterprises were not as successful as Echigo. The oil territory extends from southwest to northeast to a distance of more than 50 miles, and an average width of 10 miles. It produces several hundred barrels of crude a day, which is the most suitable for burning oil. More than 200 wells are in existence, most of them sunk by the shafting and artesian methods. It is one of the most promising oil fields in Japan. In addition to the above mentioned oil fields there are a few unimportant ones scattered in different directions.

The Island of Formosa.—In Formosa they have not only coal, silver, gold, etc., but also petroleum deposits. No active work has yet been done in the island. It is a very promising territory, as it has close geographical as well as geological relations with the Java and Sumatra oil fields.

GEOGRAPHICAL SUB-DIVISIONS OF THE ECHIGO OIL FIELDS.

The petroleum which has been subjected to chemical investigation is obtained entirely from the Echigo oil fields, and it is not unimportant to show their places of origin by giving a brief geographical sub-division of the field.

This oil field may be divided into seven districts, though they are understood by the people as the western and eastern oil territories, as the river Shinano runs between them.

The Kurokawa Oil Field.—This is the most northern oil district; it yields very heavy oil and all of the wells are shallower than in other districts, being from 60 to 80 feet in depth. It is a comparatively recent field, but it is believed that further experiments will prove it to be a profitable one.

The Niitsu Oil District.—About 30 miles southwest of Kurokawa lies the Niitsu oil field. It is the oldest place in the history of Japanese petroleum. There are many gas wells as well as flowing oil wells there. The wells are sunk mostly by "kazusabori," and some by the American system of drilling. The district is noted for many promising shallow wells, ranging from 240 feet to 600 feet deep. There are also a large number of refineries and some pipe lines. The crude from this district is more suitable for making lubricating oil than any other purposes, similar to that of Franklin, Pa., U. S. A. Two specimens of petroleum have come under my researches from this district. They are Koguchi and Kusodsu. From the tremendous pressure of natural gas noticeable, and almost universal oil exposure in this section, it is very easy to prophesy that this will continue one of the richest oil fields in Japan in the future, as it is now.

The Nagaoka Oil Field.—This is situated about 50 miles up the Shinango river, south of the Niitsu oil field.

It is the second oil field in Japan in the matter of production. The average per well is about 20 barrels, and the total production is 600 barrels per day. The chief oil vein extends a distance of 20 by 9 miles, from southwest to northeast. All the productive oil wells here are found in a group of hills not more than 700-800 feet above the sea level. The depth of the well averages from 480-660 feet. There are nearly 700 oil wells in the district, the richest of which produces more than 100 barrels a day. The district is divided into Hirei, Katsubo and Kitatany. More than

*A paper read at the Petroleum Congress, Paris Exposition, from Petroleum Review.

thirty refineries have been erected, and four pipe line companies are at work. The crude oil is generally of a dark brown color, some of which contains sulphur in considerable quantities. Three samples were taken from this district for my researches, that is, from Katsubo, Hirei and Kitatany. These three oil districts are located in the eastern part of the province, with Shinango river as the center, and are understood as the eastern oil district in this province.

The Amaze Oil District.—This district is the pioneer of the great oil discovery in Japan, and at one time was the center of the industry. It is also the seat of the Japan Oil Co. The oil district is located in the northwestern part of the province, while a number of smaller territories are scattered around the city of Amaze, the principal oil vein being right in the city. It is here that the wells have been sunk in the sea. This oil field is much larger than that of Nagaoka, yet from the latter part of 1893 the production has been declining year after year, without including the promising territory in its vicinity, which will be worked out in the future. The crude oil produced in this oil field is the best for burning purposes ever found in the world, as it yields more than 80 per cent. of the distillate between 150 and 300 degs. C. The daily production is not now much more than 50 barrels throughout the whole district. The wells here are considered to be the deepest in the Japanese oil fields, ranging from 600 to 2,800 feet. Natural gas is also found in this district.

The Miyagawa Oil District.—Not more than fifty miles south of Amaze lies the Miyagawa oil district. Though not a very large territory, the greatest discovery of oil in recent years was found at Nagamine and Kamada, both of which are classified under this district, as they are very near each other, and produce a similar crude. Soon after the discovery of these fields four large pipe lines were started, capable of transporting 3,000 barrels of crude daily to thirty-six new refineries in the vicinity. Even the Japan Oil Co. have had to remove their headquarters from their old place at Amaze to Kashinazaki, the nearest city to the field. There are more than 150 derricks here producing oil, from 20 to 300 barrels a day per well. The depth of oil wells averages 500 feet, most of them being flowing wells. Oil is found nearly everywhere in this district, but generally on hills of about 50° feet high. This is the easiest field in which to drill a well, being finished sometimes in even two weeks; consequently, in this new oil field one does not see the remains of the old-fashioned methods, such as "shafting" or "artesian" boring. Generally speaking, this new oil field is far ahead of the others, and at present controls the petroleum world of Japan.

The Genoji Oil District.—This oil district starts about ten miles west of the Miyagawa, while in the southwest it is connected with the Shenano oil field without any interruption. This is the largest oil district in Echigo, and between 1880 and 1890 was one of the richest fields. The district comprises Gendoji, Matsunoyama, Fukazawa and other minor districts. All the wells are put down by "shafting," except a few which have been "drilling" recently. During the prosperous era (1880-1890) the total daily production was more than 500 barrels in this section, but a sudden decline set in for various reasons. Like the Amaze oil district, almost all the wells produce a very light crude in color and gravity, containing natural paraffin in scales. The extent of the oil district is about 50 miles, with width varying from 10 to 30 miles. The depth of oil wells here varies from 620 to 900 feet, but the production is not so large as in the other districts. The greatest obstacle to carrying out drilling in this section is the "landslip," which causes the caving in of the wells. A few successful wells have been drilled by the American method recently. This district will not produce more than 250 barrels daily, and all the wells are put down in the hilly regions.

The Hiyama Oil District.—Although natural gas and oil is found in many places, the universal occurrence of volcanic rocks, which overlay the oil-bearing strata, prevents very rapid progress of the industry in this district, but drilling has been started from the latter part of 1898, and has proved quite a paying investment. This district is the western extremity of the Echigo oil field, and is continuous to the Gendoji district in the west. The tetonic disturbance interrupted its relation to the other oil fields. The crude oil found in this district is of rather lighter gravity, but darker in color compared with the Gendoji oil field. Most of the wells are very shallow, and no rich wells are ever found, but the field has many workable territories. Besides the territory in the Echigo province, there are more than a hundred places on the Japan Sea where natural exposures of petroleum and natural gas occur. Such natural oil exposures are specially to be seen on the sea coast near the Hiyama, Amaze and Ugo oil districts. In crossing the sea between such sections in a boat one can see the bubbles of oil and natural gas coming out through the water at intervals and spreading out in all directions. The appearances of petroleum in the sea form a definite belt, if they are connected, and indicate a direction from southwest to northeast.

GEOLOGICAL FORMATION.

In the Echigo oil field are found volcanic as well as sedimentary rocks, which constitute the formation. The volcanic rocks are composed of those of plutonic origin, such as gneiss, granite and diorite; while the younger volcanic rocks are mostly augite or hornblende and schist. But the volcanic rocks have no relation to the origin of petroleum in Japan, though, in my opinion, the volcanic disturbance causes the introducing of the natural sources of petroleum. The sedimentary rocks found in this oil field are paleozoic, mesozoic, tertiary, diluvium and alluvium. The tertiary is, however, the chief source of petroleum in Japan, though it is also found in the two latter formations, in which case they are not of indigenous origin, but removed from the original place to such porous strata as the diluvium and alluvium strata.

The tertiary covers more than two-thirds of the entire province of Echigo, locating itself mostly in the center. It is formed chiefly of slate, conglomerate, sandstone and calcareous matter of various shades and textures. The oil-bearing rocks are mostly standstone covered by an impervious shale strata, while, in a few places where volcanic action has been violent, a white-grayish, calcareous substance provides a receptacle for oil also. Shale or sandstone, or both, must be considered as the parent rock of petroleum in Japan. Fossils are not very uncommon in the tertiary formation, but are mostly found in shales. The most common kinds of fossils are shells rather than plants. The shell fossils include pectin, nassa, pectunculus, dentalium, turbo, cerithium, choncocellae, managerina, natica, etc., and are all the remains of recent organisms of the tertiary era.

From the nature of the rocks and the descriptions of fossils, it is an unmistakable fact that the Echigo oil deposit has its origin in the pliocene era of the tertiary formation, similar to the Russian and Californian oil deposits. There is one field, however, which was discovered very recently and has proved to belong to the paleozoic formation. This is in the Kyushyu oil field, in the south, but more careful researches are needed to actually prove this.

It has been shown, therefore, that the petroleum of Japan is of organic origin of the tertiary formation, mostly from marine life, while the tectonic disturbances were the cause of bringing the oil to Japan, and thus no chemical theory can be applied to the origin of Japanese petroleum.

The general direction of oil veins, with few exceptions, is from S. W.-N. E., with varying angles.

The dips of the tertiary strata in the oil fields are very irregular, but make a considerably wider angle when compared with those of North America; that is, they range from 20 deg. to 50 deg., or even 70 deg., and sometimes are almost vertical. This is similar to the Russian oil fields, so far as the inclines are concerned.

The anticlinal theory of Dr. Orton and other authors is well applied to these oil fields, yet there must be a vast reservoir underground in a limited space in certain oil districts.

THE PRESENT CONDITION OF THE OIL INDUSTRY IN JAPAN.

The main oil fields of Japan, if classified by the division of provinces, are Echigo, Shinano, Ugo and Totomi, while the remainder are not worthy of mention at present.

The total production of oil in Japan is about 5,000 barrels a day, while the Echigo oil field produces over 90 per cent. of the whole. The total production of petroleum in Japan may be as follows:—

Province.	Quantity.
Echigo	4,800 barrels.
Shinano	60 barrels.
Ugo	50 barrels.
Totomi	60 barrels.
Total	5,000 barrels.

There are about twenty large producing companies, besides hundreds of smaller ones, and about 100 tank cars, which were built during the last year.

The oil refineries number about ninety-five in all, with the total capacity of 4,200 barrels of crude a day.

The Imports of Oil.—The importation of refined oils from the United States, Russia and Sumatra has been increasing every year, and still remains third on the list of articles imported into Japan.

The Supply Required.—The total demand of all kinds of refined petroleum in Japan may be calculated at about $10,000,000 a year, while the domestic supplies are about $3,500,000—that is, a little over one-third of the total demand of Japan.

The Increasing Production.—About twelve years ago the entire oil fields produced only 30,000 to 40,000 barrels annually. In 1890 it was increased to 60,000 barrels. In 1894 it was 140,000 barrels, then an abrupt, a sudden increase occcurred during the year 1899, and the output amounted to about 900,000 barrels. Since the discovery of the Kamada and Nagamine oil fields at the end of last year, the annual production has increased to about 1,800,000 barrels. It will not be long before the annual production of petroleum in Japan reaches 5,000,000 barrels a year, and takes its place as the third oil producing country in the world.

Number of Wells.—The number of wells in existence are more than 2,000, one-third of which are put down by the American system.

Pipe Line Companies.—There are five pipe line companies with the total length of line of about 150 miles, and a long direct pipe line, having a length of over 200 miles, will be started by the Japan Oil Company soon between Tokio and Echigo.

In short, the petroleum industry of Japan has a shorter existence than any other oil industry, yet there are a number of promising oil territories still to be found, and the people are very anxious to adopt the best methods for improving the industry. The home production will soon be sufficient to meet all the demands made upon it, and an export trade will then be developed.

The researches into the chemical nature of Japanese petroleum have not yet been carried farther than the specific gravity and fractional distillation by a few chemists. This is the first time, therefore, that such a work has ever been published on the chemical nature of petroleum in Japan.

Composition of Petroleum.—The nature of petroleums found in Japan is variable according to their localities. Some are black and a little heavier than water, like asphalt, while others are light in both gravity and color.

The kinds of petroleum already known in the country are about twenty-seven, which are arranged in the following table according to their gravity, etc.:—

Locality.	Sp. gr. at 20°.	Color.
1. Iwada, Echigo Province	.801	Deep brown, red.
2. Sagara, Totomi Province	.808	Reddish brown.
3. Ishikari, Hokkaido Province	.809	Light red, brown.
4. Amaze, Echigo Province	.818	Greenish brown.
5. Matsunoyama Province	.820	Greenish brown.
6. Gendoji Province	.825	Greenish brown.
7. Takezawa Province	.828	Greenish brown.
8. Takezawa Province	.830	Greenish brown.
9. Hiyama Province	.837	Greenish brown.
10. Hiyama Province	.867	Greenish brown.
11. Katsubo Province	.877	Dark brown.
12. Kitatany Province	.895	Dark brown.
13. Hirei Province	.866	Greenish brown.
14. Akita, Uzen Province	.866	Dark brown.
15. Miyagawa, Echigo Province	.891	Greenish brown.
16. Nagatany, Echigo Province	.900	Dark brown.
17. Miyohoji, Echigo Province	.904	Greenish brown.
18. Kamada, Echigo Province	.905	Dark brown.
19. Nagamine, Echigo Province	.906	Dark brown.
20. Koguchi, Echigo Province	.925	Greenish brown.
21. Kusodsu, Echigo Province	.921	Greenish brown.
22. Kurokawa, Echigo Province	.927	Dark brown.
23. Minauchi, Shinano Province	.927	Reddish black.
24. Nigorikawa, Ugo Province	.937	Dark brown.
25. Isobe, Neno Province	.946	Deep brown.
26. Toshima, Hokkaido	.984	Deep brown.
27. Kanatsu, Echigo Province	.975	Pitch dark.

The specific gravity of petroleum found in Japan ranges from .801-.975, while 15 out of 27 kinds have a specific gravity exceeding .900.

Among the above mentioned petroleums the following lands have been fractionated by Mr. K. Kondo, a chemist attached to the geological survey of Japan:—

Locality.	At 150°. P. c.	At 150° to 300°. P. c.	At 300°. P. c.
1. Sagara, Totomi Province.	42.0	44.6	13.4
2. Iwada, Echigo Province.	55.0	35.0	10.0
3. Yatezawa, Echigo Province	5.8	55.9	33.3
4. Myohoji, Echigo Province	33.5	49.0	17.5
5. Ushirdani, Echigo Province	5.0	45.0	50.0
6. Matsunoyama, Echigo Province	33.5	47.5	14.0
7. Gendoji, Echigo Province	29.0	50.0	21.0
8. Hiyama Province	14.5	47.9	37.6
9. Akita, Ugo Province	—	37.5	62.5
10. Ennai, Ugo Province	6.0	39.0	55.0
11. Minauchi, Shinano Province	—	20.0	80.0

The lightest crude gives more than 55 per cent. for benzine, while the heaviest kinds contain 80 per cent. as residuum.

Several different kinds of petroleum from Japan have been chemically examined by me, but, owing to the limited quantity obtainable, some have not been carried to their ultimate determinations. Three of the crude oils have, however, been closely examined. The remaining four, which are left for further experiments, will be reported as soon as the opportunity arrives.

The seven descriptions of crude from Echigo Province are:—

(1.) Hirei, Kitatany, Katusbo, of the Nagaoka oil field; (2.) Kusodsu, Koguchi, of the Niitsu oil field; (3.) Amaze, of Amaze oil field; (4.) Miyagawa, of Miyagawa oil field.

The results of the examinations of these petroleums will be given according to the order of the experiments carried out at different times.

Specific Gravity.—The specific gravity of the petroleums ranges from 0.8245 of Amaze to .9435 of Kuguchi origin. While the remainder are 0.8622, .8771, .8952, .8911, .9210 for Hirei, Katsubo, Kitatany, Miyagawa and Kusodsu respectively.

The above-mentioned specific gravities are taken at 20 deg. C. The result shows that even in the same oil field there are great differences in the specific gravity of the petroleum. Generally speaking, the western part of the Echigo oil field produces lighter crude, both in color and gravity, than that of the east. The specific gravities are expressed by Baume scale, as follows:—

Locality.	Sp. gr.	Baume.
Amaze	.8245	39.8
Hirei	.8622	32.4
Katsubo	.8771	30.7
Miyagawa	.8911	27.1
Kitatany	.8952	26.8
Kusodsu	.9210	22.0
Koguchi	.9435	18.4

Owing to the long passage from Japan, most of the petroleums have undergone evaporation, with the exception, perhaps, of the two heavier kinds. The investigations, however, show results not very different from those obtained in the oil fields.

It is noticed that the specific gravity changes somewhat according to the depth of a well; the deeper the well the lighter the oil.

Color.—This investigation is not of very great importance, still it is some indication of the nature of the crude; for, in the first part, it is ascertained that the darker shade is given to the crude from Nagaoka, while the Amaze has a lighter color than any of the others, and the Miyagawa crude is more like Amaze petroleum in color than any of the others.

The Vogicliu and Kusodsu are not only geographically, but also geologically, similar to each other, and have almost the same physical and chemical properties, except the difference in specific gravity, which will be shown later.

Odor.—This indicates the nature of the crudes better than the color, for while Miyagawa and Kusodsu oils have a very similar shade, yet the odor is very different and a further test showed that they were not as similar as was expected.

The Amaze crude has the pleasantest odor, and next comes Miyagawa oil. The Nagaoka crudes have a somewhat earthy odor like asphalt, and in Katsubo oil the odor is disagreeable, somewhat like Ohio crude oil.

The Kusodsu and Kouchi oils have entirely different odors from the others, and have a smell like camphor or resin oil.

The further examination has not been carried out on the last two oils, but it is expected to be quite different from the rest.

Mineral Impurities.—The crudes are transferred from the original cans into bottles, into which was put coarse grained calcium chloride for over two months, then each was removed to another bottle, perfectly dried, in which

sufficient sodium is put to absorb all the moisture in the crude oils.

About one month later the experiments were made. Between 14 and 12 grams of the crude oil was taken and put into a porcelain crucible. The lighter portions were then burnt off slowly; and then Bunsen flame or even air blast flame was applied to drive all the carbon out by perfect combustion. In some crude oil it was very hard to burn off all the carbon by Bunsen's flame alone.

The mineral impurities found in the oils range from .0221 to .0642 grams for the amount of samples. The percentage is calculated from .16 per cent. to .55 per cent. The predominant mineral impurity was lime, with a very little iron and silica; the total impurities of which amounted to 0.22 per cent. Sodium may be taken with the oil out of the bottle.

The Hirei crude contained .55 per cent. of mineral imprities, and, unlike the Amaze crude, the greater part was silica, and not of lime; iron was also present. In Kitatany and Katsubo crudes the percentages were .30 per cent and .29 per cent. respectively, the impurities being almost the same as those of Hirei. In Miyagawa crude, .16 per cent. of mineral impurities was found, or less than the other six oils. The impurities consisted chiefly of lime, as in the Amaze oil. Kusodsu and Koguchi showed almost the same kind of mineral impurities, such as lime and silica, in almost equal parts, with a little iron.

It is clear that lime and silica in the oils come from the ground in which they are found, while the iron is derived from drilling, pumping and transportation, tools and vessels. The impurities do not play any part in the chemical composition of the crudes, while the lime and silica tell us very plainly the geological nature of the surrounding rocks in which these oils were found.

COEFFICIENTS OF EXPANSION.

Each crude was investigated at 5 deg., 15 deg. and 25 deg. The difference of specific gravity at the described temperatures was divided by 10, and the numbers multiplied by 1,000,000, showed the coefficient of expansion as follows:—

The results by Dr. Engler are also given in the table of comparison:—

Foreign (by Dr. Engler).		Japanese (by Takano).	
1. Pennsylvania..	.840	1. Amaze.....	.825
2. Canada.....	.843	2. Hirei.....	.785
3. Virginia.....	.839	3. Kitatany.....	.795
4. Galicia.....	.813	4. Koguchi.....	.675
5. Rangoon.....	.774	5. Kusodsu.....	.615
6. Caucasus.....	.817	6. Katsubo.....	.765
7. Ohio.....	.748	7. Miyagawa.....	.745
8. Baku.....	.784		
9. Pechelbrown...	.792		
10. Hanover.....	.647		

According to St. Clair Deville, the expansion ranged from .440 of Italian to .960 Zante crude, while West Virginia, Pennsylvania, Canada, Burma, Russia and Galicia petroleums were .460, .820, .440, .720, .710, and .770 respectively. The results showed that the Japanese crudes more resemble the European crude than American, when the coefficient of expansion is considered.

Carbon and Hydrogen.—Before producing combustion for the determination of the amount of carbon and hydrogen, all the samples were thoroughly dried free from any trace of moisture in the crudes by putting in a sufficient quantity of sodium. As will be shown later, the crude contains some quantity of mineral impurities as well as oxygen, but this examination showed the comparative amounts of hydrogen and carbon contained in the crudes.

Amaze crude contains 84.66 per cent. of carbon and 13.22 per cent. of hydrogen. This is calculated from .7869 CO2 and .3051 H2O for .2565 of the crude taken.

Hirei.—The amount of crude taken was .1521, after combustion H2O weighed .1814 and CO2 .4645 grams, which is calculated at 13.19 per cent. and 83.28 per cent. for hydrogen and carbon respectively. This crude contained more impurities than the Amaze oil.

Katsubo.—The weight of the crude taken was .1593, which gave .1832 for H2O and .4985 for carbon. This showed 12.78 per cent. for hydrogen and 85.35 per cent. for carbon.

Kitatany.—.1503 grams of the crude was taken. It gave .1765 of H2O, and .4688 of CO2. The percentages are 13.05 for hydrogen and 35.05 for carbon.

Koguchi.—.1719 grains of this crude were taken. It gave .2102 of H2O and .5284 of CO2; the percentage will be 83.91 per cent., and 13.60 per cent. for carbon and hydrogen respectively.

Kusodsu.—The crude was taken to the extent of .1475 grams, which gave .1779 grams of H2O; .4572 grams of CO2 gave 13.40 per cent. and 84.49 per cent. for hydrogen and carbon.

—Miyagaw.—The quantity of the crude taken was .1308 grams. It gave .1628 grams of H2O and .4070 grams of CO2. The percentage was calculated as 13.83 and 84.86 hydrogen and carbon.

The above examination showed that the Miyagawa crude is the purest, while the Hirei contains the least percentage of carbon and hydrogen.

The test is not considered very accurate to determine the series to which the crudes belong, but it gave the only means by which the percentage of C and H, and the comparative calorific powers thereof.

SULPHUR TEST.

No examination as to the form of compounds in which the sulphur exists in the crude was made, but the determination for the percentage of sulphur was done by the Carius method.

It was found that in special sulphur oil the quantity should not exceed more than .1200 grams, and not over 3 or 4 cc. for HNO3, otherwise the oxidation would be so violent that the explosion of Carius tube invariably occurs, even in the first heating.

To show the relation of the quantity of sulphur, Tiona crude was also taken with the Japanese crude, as the determination of sulphur is very interesting as well as important.

Amaze gave .0029 grams of Ba S04 from .1724 grams of crude, which makes 0.23 per cent. for sulphur.

Hirei gave .0044 Ba So4 from .1453 grams of crude, which correspond to 0.41 per cent. for sulphur contained in the crude.

Katsubo gave .0075 Ba So4 out of .1246 grams of crude, which showed .83 per cent. for sulphur.

Koguchi.—.1524 grams of crude was taken, which gave .0060 grams of Ba So4, and showed the percentage of sulphur to be 0.49 per cent.

Kusodsu crude was taken to the extent of .1480 gr.; it gave .0041 barium sulphate, or .37 per cent. for sulphur.

Kitatany gave .0081 grams of Ba S04, out of .1825 grams of crude, which corresponds to .61 per cent. for sulphur.

Miyagawa gave .0083 grains of Ba S04 out of .1142 grams of crude, which is .32 per cent. for sulphur.

Tiona, Pa., gave .0030 grams of Ba S04 out of .1029 grams of crude. This showed .06 per cent. for sulphur.

Tiona is considered almost the purest hydrocarbon in existence; still, the examination mentioned above showed the presence of sulphur, though small.

It is an actual fact now that all the Japanese crudes contain sulphur of considerable quantity, the largest percentage being found in Katsubo, while the least occurs in Amaze petroleum.

NITROGEN TEST.

This was effected by the Dumas method, as all carried out by the Kaldahl method failed each time.

Amaze.—1.3020 grams of crude was taken, and gave .0011235 grams of nitrogen, which showed .35 per cent. nitrogen.

Hirei crude was taken to the extent of .6993, which gave .001125 grams of nitrogen, which is calculated to .74 per cent. for nitrogen.

Katsubo was taken to the extent of .2660 grams, and gave .001124 grams of nitrogen, which showed .97 per cent. for nitrogen.

Kitatany.—.6835 grams of the crude was taken, nitrogen being given to the extent of .001119 grams, showing .75 per cent. for nitrogen.

Koguchi gave .001100 grams of nitrogen out of 1.2228 grams of the crude. The percentage showed 1.34 per cent. for nitrogen.

Kusodsu gave .001098 grams of nitrogen out of 1.0659 grams of the crude, which will correspond to 1.23 per cent. for nitrogen.

Miyagawa showed .55 per cent. for nitrogen, when calculated from .01113 grams of nitrogen out of 1.1040 grams of the crude.

From the results mentioned above, the Japanese crudes contain nitrogen in variable amounts. The Amaze crude contains the least, and Koguchi crude the highest percentage of nitrogen. This is not so much as in Californian petroleum, but the last-named crude contains about a similar amount of nitrogen, which was shown by the results obtained by Dr. Mabery with Californian oils.

In short, most of the Japanese crudes range themselves between Ohio and California crude if the percentage of nitrogen is considered alone.

OXYGEN.

There is no better way of ascertaining the percentage of oxygen contained in petroleum than the balance of the total amount of C H N S, after the mineral impurities are allowed for.

The balance may not, therefore, be for the percentage of oxygen, but might mean something else in certain crude. The percentage which I made out for oxygen was the balance of the total sum of the preceding results. Thus:—

		Per Ct.
Amaze. ..	showed	1.32
Hirei.. ..	showed	1.83
Katsubo. ..	showed	0.21
Kitatany. ..	showed	0.24
Koguchi.	showed	0.41
Kusudsu..	showed	0.30
Miyagawa..	showed	0.28

CALORIFIC POWER.

There are two methods of determining the calorific power of a fuel; one by the use of an instrument through which the actual heat produced after complete combustion is observed and the calorific power is determined; the other by knowing the actual percentage of the chief composition, which comes into play in calorific power, and is calculated as the power.

The determination of the calorific power of the Japanese crudes was done by the latter, or calculation method.

Some authors disregard the amount of sulphur, or deduct the percentage of oxygen divided by eight. My calculation is just the opposite, because the percentage of sulphur in some of the crudes is very high. The oxygen may not be considered to come into the calculation for the calorific power, because the true nature of so-called oxygen was not ascertained in the Japanese petroleum, and can hardly be calculated as pure oxygen.

The units of heat for calorific power used are as follows:—

For carbon	.8080
For hydrogen	3.4500
For sulphur	.2500

The British thermal unit is used to compare with the calorific unit in the proportion of 18 to 1 respectively

AMAZE.

C., 84.66 × .8080	68.405280
H., 13.22 × 3.4500	45.609000
S., 23 × .2500	5.7500
Total calories	11.4071780
Thus the calorific power is	11.407
The B. T. U is	205.344

HIREI.

C., 83.28 × .8080	6729.0240
H., 13.19 × 3.4500	4550.5500
S., .41 × .2500	1.2500
Total calories	11280.8240
Calorific power	11.281
B. T. U	203.058

KATSUBO.

C., 84.52 × .8080	6829.2160
H., 13.12 × 3.4500	4526.4000
S., .83 × .2500	20.7500
Total calories	11376.3660
Calorific power	11.376
B T. U	204.768

KITATANY.

C., 85.05 × .8080	6872.0400
H., 13.05 × 3.4500	4502.2500
S., .61 × .2500	15.2500
Total calories	11389.5400
Calorific power	11.389
B. T. U	205.002

KOGUCHI.

C., 83.91 × .8080	6779.9280
H., 13.60 × 3.4500	4692.0000
S., .49 × .2500	12.2500
Total calories	11484.1780
Calorific power	11.484
B. T. U	206.712

KUSODSU.

C., 84.49 × .8080	6826.7920
H., 13.40 × .2500	4623.0000
S., .37 × .2500	9.2500
Total calories	11458.9420
Calorific power	11.459
B. T. U	206.262

MIYAGAWA.

C., 84.86 × .8080	68566.8880
H., 13.83 × 3.4500	4771.3500
S., .32 × .2500	80.000
Total calories	11636.0380
Calorific power	11.636
B. T. U	20.9448

The results show that the calorific power of Japanese petroleum ranges from 11.281 for Hirei to 11.636 for Miyagawa crude, while the Japanese crudes have higher calorific power than those crudes examined by different authorities, which range from 8.916 to 10.931, according to Redwood.

IODINE ABSORPTION.

The iodine absorption test on the crudes were done by taking perfectly dried crude of these ranging from .2000 to .5000 grams.

Each were dissolved with about 10 cc. of chloroform in a watch glass until it gave a clean solution of the mixture. The solution was removed into a narrow-necked flask with a tight stopper, then added about 20 cc. of decinormal solution of iodine.

Sometimes it was noticed that after the iodine solution was put in it produced a cloudy aspect, so that another portion of chloroform had to be added.

To get the most complete absorption, I arranged the above process later in the afternoon, and left the flask over night corked up very tight, setting it in a dark place.

In the morning the flask was taken out and about 15 C.C. of 10 per cent. Kl. solution was added and stirred well, the mixture diluted with about 150 cc. of water.

Then the free iodine is determined by titration with decinormal hypo. solution, using a clean starch solution as an indicator, which was added rather near the end of changing color.

Each time a blank test was used with the same conditions as in the actual test, except without using oil.

The difference of the iodine titrated by hypo. solution between the blank and actual test, showed the percentage of iodine absorbed by the different crudes, as follows:—

1. Amaze	none	5. Koguchi	9.79
2. Hirei	0.84	6. Kusodsu	.62
3. Katsubo	7.66	7. Miyagawa	1.63
4. Kitatany	.82		

ceding results, for which purpose this table has been given.

The percentage of iodine absorbed was the least amount or "nil" in Amaze, while it was the largest in Koguchi crude.

	Amaze.	Hirei.	Katsubo.	Kitatany.
Specific gravity...	.8240	.8622	.8771	.8952
Sulphur	0.22	.41	.83	.61
Nitrogen	.35	.74	.97	.75
Iodine	.00	.84	7.66	.82
Coefficient of expansion	82.5	78.5	76.5	79.5
Carbon	84.66	83.28	84.52	85.05
Hydrogen	13.22	13.19	13.12	13.05
Oxygen	1.32	1.83	.21	.24
Mineral impurities	.22	.55	.27	.30

	Koguchi.	Kusodsu.	Miyagawa.
Specific gravity....	.9435	.9210	.3911
Sulphur	.40	.37	.32
Nitrogen	1.34	1.33	0.55
Iodine	9.79	.62	1.63
Coefficient of expansion	6.75	6.15	7.45
Carbon	83.91	84.49	84.86
Hydrogen	13.60	13.40	13.83
Oxygen	.41	.30	.20
Mineral impurities.	.25	.21	.16

A further examination was next carried out by fractioning the crudes several times, selecting certain distillates, treating the distillates with sulphuric or fuming sulphuric acid and caustic soda.

Then the specific gravity, molecular weight, refractive index, and percentages of carbon and hydrogen were determined.

FRACTIONAL DISTILLATION.

The fractional distillation of Japanese petroleums was done in various ways.

(1.) The fractionation with dry and wet heat, the distillations of which were collected first by the gravity, and then by the fire test, and last by the color and smell. This method of fractionation is the most advanced way in use in the different refineries of the United States.

The result of this examination showed the practical value of the petroleums for commercial products, such as benzine, burning oil, and lubricating oil, with relation between each kind as well as to the petroleums of foreign origin.

In this fractional distillation the temperature is not given here, though it was observed.

In this examination the specific gravity is expressed in Baume scale and the temperature is Fahrenheit, the viscosity of lubricating stock was examined by the Saybolt Visco meter at 210 degrees Fahrenheit.

AMAZE.

Distillates.	Per cent.	
Benzine	3	60° B.
Burning oil	70	45° B.
Neutral oil	11	32° B.
Lubricating oil	10	24½°
Loss	6	
Total	100	
Burning oil	Fire test	125°
Neutral oil	Fire test	320°
Lubricating oil	Fire test	500°
Lubricating stock 60/210 test by viscosity by L.		

HIREI.

	Per cent.	
Benzine	6.6	62° B.
Burning oil	33.4	48°
Neutral oil	25.0	33°
Lubricating oil	33.0	125°
Loss	2.0	
Total	100.0	
Fire test	B. O.	123°
Fire test	N. O.	340°
Fire test	L. O.	450°
Lubricating oil viscosity		145°

KATSUBO.

Benzine	5 per cent.	62° B.
Burning oil	30 per cent.	46¾° B.
Neutral oil	26 per cent.	32° B.
Lubricating oil	35 per cent.	12°
Loss	4 per cent.	
Total	100 per cent.	
Fire test.	B.O.	120° F.
Fire test.	N.O.	250° F.
Fire test.	L.O.	450° F.
Viscosity.	L.O.	180°

KITATANY.

Benzine	2.2 per cent.	60°
Burning oil	25.0 per cent.	46°
Neutral oil	23.0 per cent.	315°
Lubricating oil	44.8 per cent.	11.5°
Loss	5.0 per cent.	
Total	100.0 per cent.	

Fire test	B.O.	122°
Fire test	N.O.	200°
Fire test	L.O	480°
Viscosity	L.O.	240°

KOGUCHI.

Ben.	0 per cent.		
B. O.	8 per cent.	35.5°	198° F.
N. O.	22 per cent.	29°	250° F.
L. O.	65 per cent.	15.5°	430° & 92°
Loss.	5 per cent.		
Total	100 per cent.		

KUSODSU.

Ben.	0 per cent.		
B. O.	12 per cent.	35°	200° F.
N. O.	30 per cent.	29°	250° F.
L. O.	51 per cent.	16.5°	470° & 435° vis.
Loss.	7 per cent.		
Total	100 per cent.		

MIYAGAWA.

Ben.	5 per cent.	59°	
B. O.	25 per cent.	43°	118° F.
N. O.	30 per cent.	26.5°	350° F.
L. O.	32 per cent.	14°	470° & 120° vis.
Loss.	8 per cent.		
Total	100 per cent.		

The preceding results showed in the first place that less temperature can be used in Japanese petroleum for the same specific gravity of distillation than those of American oils. Also that the first test of the distillates from Japanese petroleums is generally about 50 deg. to 100 deg. lower than that of the American oil of the same gravity.

The best way to obtain burning oil from Japanese petroleum is to have one grade of refined oil of so-called 120 deg. Fahrenheit than any other grade of refined oil.

All the neutral oils from the Japanese oils have less bloom and higher quality, and are thus excellently fitted for making wool stock. The burning oil of 300 F. T. from the Niitsu oil district is of very excellent quality. With the exception of Amaze petroleum, all the lubricating stocks flowed freely, no matter how long they were frozen, which fact showed that with the cold test, lubricating stock can be easily made from Japanese oils, while in the United States they make it with great skill and at about the same expense. The benzines from the Japanese crudes have a sweetish odor and need very little treatment. Paraffin was found during atmospheric distillation in the Amaze crude, though I found it in Hirei crude by vacuum distillation later. The paraffin wax began to appear first in the distillate of 28 deg. B. in Amaze crude, which was crystallized out in needles and in all forms common to wax. The percentage of paraffin wax found in the crude was calculated at 1½ per cent., while it is 2 per cent. in Pennsylvania crude. A fine vaseline was made from Amaze crude, though it would not give a good lubricating stock unless almost all paraffin wax is driven out by using a large quantity of steam. In short, Japanese petroleum is suitable for almost all burning oils, such as benzine, burning oil, and light lubricating oil, and "cold" test oil, rather than any others.

Fractional Distillation According to the Temperature.—This is used mostly in distilling petroleum, especially in the laboratory. The dry heat method is used, and the different distillates were collected in the following manner:—

150 degrees C. called Benzine.
150 degrees C. called Burning oil.
300 degrees C. called Residue.

But from my long experience, it is proved that this method of distillation is not always reliable for practical use, as commercial products are determined for their value from so many points. The results obtained by this method of distillation applied to Japanese crudes were as follows, the crude taken for distillation was 1,000 C. C. in each instance, for convenience;—

AMAZE.

The distillate came off first at 50 deg. C.

The distillates were:—

Benzine	50°	150° C.	250° C.	25%
Burning oil	150°	300° C.	536° C.	53.6%
Residue.	300°		214° C.	21.4%

The largest amount of the distillate was collected between 80-89, 100-135, 150-175, 200-255 deg.

The lower distillate below 100 deg. C. had an odor very much like benzine.

There was no difficulty in regulating the distillation, nor were yellow incrustations of sulphur compounds deposited on the inside of the condenser, as with other crude. Heavy distillate never showed any decoloration after a long exposure to the air. The burnt smell was noticed first at about 250 deg. The wax never appeared until the end; that is, up to 300 deg.

HIREI.

The distillate started first at 35 deg. C.

It gave the following percentage for the distillates:—

Benzine	218 C.C.	21.8 per cent.
Burning oil	383 C.C.	38.3 per cent.
Residue.	399 C.C.	39.9 per cent.
	1,000 C.C.	100.0 per cent.

The largest amount of distillate was collected at between 110-150, 160-170, 200-210, 220-240, 250-270 deg.

The most conspicuous phenomenon in proving the presence of sulphur in the crude was that the blue paper was changed to red when it came in contact with the moisture distilled off from the crude, which was collected at the end of the condenser. An offensive odor was given off at about 240-280 deg.

The acid reaction was observed in all the Japanese crude except Amaze, Miyagawa and Kusodsu crudes, while Koguchi crude showed much less acid reaction than the Nagaoka crudes.

The decomposition of the distillates started at 250 deg., and the heavier distillates were decolorized from light pink to deep brown after standing for some time. The residue was seemingly free from paraffin wax.

KATSUBO.

This oil started to distill at 45 degrees, but the largest amount was collected between 120-130 degrees, 140-150 degrees, 150-160 degrees, 180-190 degrees, 200-210 degrees, 210-270 degrees, and 290-300 degrees.

It gave almost the same acid reaction on the distillates as the Hirei, and began to crack at about 245 degrees.

The decoloration of the distillates was observed to be similar to those of Hirei after standing for some time. The residue had about the same nature as that of Hirei.

It yielded distillates in the following percentages:—

Benzine	150°	202 C.C.	20.2 per cent.
Burning oil	150-300°	388 C.C.	38.8 per cent.
Residue & loss.	300°	410 C.C.	41.0 per cent.

Kitatany gave the following:—

Benzine	150°	120 C.C.	12.0 per cent.
Burning oil	150-300°	240 C.C.	24.0 per cent.
Residue & loss.	300°	640 C.C.	64.0 per cent.

The distillate started at 50 degrees.

The largest amount was collected at between 50-150 degrees, 150-200 degrees, 200-210 degrees, 240-250 degrees, 260-270 degrees, 270-280 degrees, 280-290 degrees.

The decomposition begun at about 255 degrees. The residue showed no paraffin wax and flowed almost freely at ordinary temperature.

The decoloration and acid reaction of the distillates were observed in the same way as the two preceding crudes:—

KOGUCHI.

It gave no distillates at all until the temperature reached 160 degrees.

The largest percentage of the distillates was at between 250-255 degrees, 260-265 degrees, 265-270 degrees, 270-275 degrees, 280-285 degrees, 290-295 degrees.

The decoloration of the distillate was observed after standing, but the color was not so strong as in the preceding three crudes, being a little yellowish-brown. The acid reaction on the distillates was noticed very little. The cracking did not take place until about 270 degrees, and the residuum showed no paraffin wax at all. It yielded distillates in the following proportions:—

Benzine	150°	none.		
Burning oil	150-300°	250 C.C.	25	per cent.
Residuum and loss	300°	750 C.C.	75	per cent.
Total		1,000 C.C.	100	per cent.

KUSODSU.

It started distilling at 150 degrees, but not in sufficient quantities to collect as much as 1 c.c The largest quantity of the distillates was collected at between 225-230 degrees, 240-245 degrees, 245-250 degrees, 250-255 degrees, 255-260 degrees, 280-300 degrees, especially at between 265-270 degrees. The cracking, decoloration, and the acid reaction of the distillates were similar to those in the Koguchi oil, and were as follows:—

Benzine	none.			
Burning oil	150-300°	253 C.C.	25.3	per cent.
Residuum	300°	747 C.C.	74.7	per cent.
Total		1,000 C.C.	100	per cent.

MIYAGAWA.

The general aspect of the distillates was more like that of Amaze than of any others; the first distillate started at 65 degrees. The largest quantity of the distillates was found at between 110-130 degrees, 140-150 degrees, 150-155 degrees, 170-175 degrees, 225-280 degrees, and especially at between 285-290 degrees.

The percentage of distillates was as follows:—

Benzine	150°	150 C.C.	15	per cent.
Burning oil	150-300°	368 C.C.	36.8	per cent.
Residuum and loss	300°	482 C.C.	48.2	per cent.
Total		1,000 C.C.	100	per cent.

The residuum ran freely at ordinary temperature, showing little paraffin wax.

From the preceding results, the conclusion arrived at is that the Amaze crude contains lower, as well as higher, hydrocarbons in greater quantity than the others, while the residuum contains solid hydrocarbons.

The Hirei, Katsubo and Kitatany oils, showing almost the same results, are proved to contain a larger quantity of benzine for the specific gravity of the crudes, while the presence of sulphur was distinctly shown during the distillation.

The Koguchi and Kusodsu crudes showed almost similar results—that is, they do not contain hydrocarbon below 150 degrees at all, and from the aspect of decoloration of their distillates, it could be proved that they contain a larger quantity of oxygen compounds than any of the others.

The Miyagawa crude showed almost similar results as those obtained with Amaze oil, taking into consideration the heavier specific gravity of the crude than the latter. It does not contain as much lower hydrocarbon as the latter, and showed no trace of solid hydrocarbon.

VACUUM DISTILLATION.

Owing to the limited time at my disposal, the vacuum distillation was not carried out for all Japaneze crude as desired, but certain kinds were selected for the purpose, the results of which may be taken as representative of the seven petroleums.

The vacuum distillation was done by taking the residuum of the selected crudes, the distillation of which was carried under ordinary atmospheric pressure as high as 220 deg. beforehand, for the temperature had showed, according to the foregoing test, that no cracking took place at that point, thus preventing the risk of cracking. The vacuum used was 50 mm., 30 mm. and 25 mm., and the distillation was carried as high as 350 deg.

The selected crudes for vacuum distillation were Amaze, representing Miyagawa; Hirei, representing Kitatany and Katsubo crudes; and Kusodsu, representing the Koguchi petroleum.

Amaze.—The vacuum used in the distillation of this crude was 50 mm. It will correspond to about 100 deg. more than the distillation under ordinary atmospheric pressure. 700 C.C. of the residuum was taken. It gave the following results:—

Temperature. Degrees.	C.C.	Temperature. Degrees.	C.C.
205—210	16	245—250	12
210—215	20	250—255	30
215—220	18	255—260	22
220—225	22	260—265	26
225—230	24	265—270	18
230—235	24	270—275	10
235—240	23	275—280	43
240—245	21	280—285	24
285—290	22	315—320	18
290—295	20	320—325	13
295—300	16	325—330	22
300—325	26	330—335	16
305—310	16	335—340	22
310—315	13	340—345	20
		345—350	18
		Total	585
		Residuum	115
			700

The distillate decolorized first at 160 deg.

The crystalline wax appeared first in this distillate, which was shown in ordinary atmospheric pressure at 205-210 deg.

The solid amorphous wax was found first at 265-270 deg., which gave to the distillate a solidified consistency. Even in vacuum distillation the cracking took place at about 345-350 deg.

The wax contained in the crude is of two kinds, one in a crystallized form and the other in the amorphous state. The point at which the first wax distilled off was about the same as with Pennsylvania crude.

Hirei.—The vacuum used for the distillation of this crude was 25 mm. pressure, corresponding to about 125 deg. higher than the ordinary atmospheric pressure. The quantity of the residuum at 800 C.C.

The results of the distillation were as follows:—

Temperature. Degrees.	C.C.	Temperature. Degrees.	C.C.
150—155	26	180—185	32
155—160	24	185—190	25
160—165	25	190—195	35
165—170	30	195—200	25
170—175	40	200—205	35
175—180	28	205—210	30
210—215	24	230—235	16
215—220	34	235—240	34
220—225	37	240—245	20
225—230	15	245—250	17
		Total	352
		Residuum	448
			800

The decoloration of the distillate started at 140 deg. The crystallized wax came off first at 240-250 deg. It was difficult to go higher than 300 deg. without cracking. The distillates obtained above 295 deg. became solid at the ordinary temperature.

Kusodsu.—The vacuum used was 30 mm. This will correspond to about 120 deg. more than the ordinary atmospheric pressure. The quantity was 1,800 cc.

The following results were obtained:—

Temperature. Degrees.	C.C.	Temperature. Degrees.	C.C.
135—140	280	215—220	37
140—145	68	220—225	42
145—150	29	225—230	55
150-155	40	230—235	22
155—160	43	235—240	24
160—165	47	240—245	23
165—170	27	245—250	24
170—175	23	250—255	25
175—180	65	255—260	26
180—185	40	260—265	23
185—190	56	265—270	22
190—195	42	270—275	23
195—200	41	275—280	17
200—205	17	280—285	15
205—210	34	285—290	14
210—215	42	290—295	15
		295—300	13
Total			1,313
Residuum			487

The decoloration of the distillates did not start until 160 deg., when a faint, yellowish shade appeared, which changed again into yellowish blue. The solidified distillate at ordinary temperature was not given at all. The residuum, after the distillation, showed no solidified hydrocarbons. The higher distillates showed a pinkish blue color by reflected light, while by transmitted light they showed a beautiful reddish yellow. The burnt smell occurred at 270 deg.

DISTILLATION FOR SELECTING CERTAIN DISTILLATES FOR DETERMINING THE SERIES OF HYDROCARBON, MOLECULAR WEIGHT, REFRACTIVE INDICES AND NITRATION.

This distillation was carried out under ordinary atmospheric pressure, first by taking the first distillates from the crudes—that is, benzine 150 deg., burning oil 150 deg.-300 deg., but excluding residuum above 300 deg., and the distillates were collected at every 10 deg. The second fractionation was done by taking the distillates above every 10 deg. The third fractionation was done by taking the second distillates separately for every 5 deg., and the last fractionation was made by selecting certain distillates out of the third fractionation and the distillates were collected every 2 deg.

The selected distillates were collected at between 80-82 deg., 98-100 deg., 118-120 deg., 134-136 deg., 160-162 deg., 195-196 deg., 214-216 deg., 228-230 deg., 248-250 deg.

The object of such repeated fractionation was to get the purest hydrocarbons which boil at a definite temperature, so the fractionation was done for further determinations four times in succession.

TREATING THE DISTILLATES.

Before making further examination, it was still necessary, beside the repeated fractionation, to treat the distillates with concentrated sulphuric acid, or forming sulphuric acid and caustic soda solution. The water-washing of the distillates, after treating each with acid and alkali, was thoroughly done to clean off the remaining chemicals. The results of the treatment showed that the acid did not give much dark sludge from the distillates below 230 deg.

SPECIFIC GRAVITY OF DISTILLATES AFTER TREATING WITH ACID AND ALKALI.

The distillates, whose specific gravities were examined, were Amaze, Hirei, Miyagawa and Kusodsu, representing the whole.

The results were as follow:—

Degrees.	Amaze.	Hirei.	Miyagawa.	Kusodsu.
80—82	.7343	.7280	.7139	—
89—100	.7450	.7412	.7364	—
118—120	.7621	.7523	.7631	—
134—136	.8061	.7676	.7772	—
160—162	.7902	.7887	.8088	.8145
194—196	.8165	.8192	.8493	.8380
214—216	.8214	.8327	.8670	.8490
228—230	.7929	.8345	.8670	.8617
248—250	.8187	.8417	.8770	.8605

The table above shows that, generally speaking, the lightest specific gravity is that of the Amaze distillates and the heaviest that of the Kusodsu distillates, while the Hirei and the Miyagawa came between these two.

The results showed also that the Japanese distillates have a far greater specific gravity than those of American petroleum or even some European petroleums, while they were proved to belong to the methylene series of hydrocarbons similar to Russian petroleum investigated by Markovinikoff.

MOLECULAR WEIGHT.

The examination for this purpose was done by the freezing point method of Beckmann.

The distillates under examination

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were those detained from Amaze, Hirei, Miyagawa and Kusodsu crude oils, results of which are shown in the following table:—

AMAZE.

Distillates. Degrees.	Chemical Formula.	Calculated.	Actual.	Difference on Calculated.
98—100	C7H14	198	100.8	+ 2.8
118—120	C8H16	112	116.7	+ 4.7
134—136	C9H18	126	119.2	— 6.8
160—162	C10H20	140	145.5	+ 5.5
194—196	C11H22	154	156	+ 2.0
214—216	C12H24	168	172	+ 4.0

The actual molecular weight was greater than that calculated for in the Amaze distillates. This must be due to certain compounds existing in the petroleum.

Hirei.—The results of the molecular weight test on the Hirei petroleum were as follows:—

Distillates. Degrees.	Formula.	Calculated.	Actual.	Difference on Calculated.
98—100	C7H14	98	98.1	+ 0.1
118—120	C8H16	112	103.7	— 0.5
134—136	C9H18	126	127.8	+ 1.8
160—162	C10H20	140	136.5	— 3.5
194—196	C11H22	154	158.4	+ 4.4
214—216	C12H24	168	172.2	+ 4.2

The difference between the calculated and the actual figures are, unlike the Amaze, irregular.

Miyagawa.—The molecular weights of the Miyagawa distillates are as follows:—

Distillates. Degrees.	Formula.	Calculated.	Actual.	Difference on Calculated.
98—100	C7H14	98	100.2	+ 2.2
118—120	C8H16	112	111.4	— 0.6
134—136	C9H18	126	123.4	— 2.6
160—162	C10H20	140	137.2	— 2.8
194—196	C11H22	154	152.7	— 1.3
214—216	C12H24	168	167.5	— 0.5

The results show that with the exception of the distillate between 98-100, the actual molecular weight in all others is smaller than those calculated for, contrary to the Amaze distillates.

Kusodsu.—The distillates were not collected for molecular weight examination in this case, as the crude did not yield distillates below 150° on account of its heavy specific gravity.

The results were as follows:—

Distillates. Degrees.	Formula.	Calculated.	Actual.	Difference
160—162	C10H20	140	137.3	— 2.7
194—196	C11H22	154	157.1	+ 3.1
214—216	C12H24	168	173.2	+ 5.2

In this instance the actual molecular weight was greater than that calculated for.

REFRACTIVE INDICES.

The samples selected for examination were Amaze, Hirei, Kusodsu and Miyagawa, and gave the following results:—

Distillate. Degrees.	Obs'd Angl.	Refractive Index.	Molecular Weight Calculated.	Refractive Actual.	Difference.
80— 82	52° 29′	1.4139	27.61	28.87	+1.26
98—100	51° 34′	1.4193	32.21	33.03	+ .82
118—120	50° 30′	1.4256	36.82	37.68	+ .86
134—136	48° 59′	1.4348	41.42	42.27	+ .85
160—162	47° 49′	1.4418	46.03	46.94	+ .91
194—196	46° 46′	1.4481	50.63	51.24	+ .61
214—216	45° 21′	1.4535	55.23	55.76	+ .53
228—236	45° 47′	1.4567	62.40	62.58	+ .18
248—250	45° 54′	1.4590	69.71	69.00	— .67

The results showed that the refractive indices are pretty close to those calculated for and found, and also that the molecular weight found was always a little greater than that calculated for, with the only exception of the distillate at between 248° and 250°.

HIREI.

Distillates. Degrees.	Obs'd Angl.	Refractive Index.	Molecular Weight Calculated.	Refractive Actual.	Difference.
80— 82	54° 24′	1.4024	27.61	27.91	+ .30
98—100	53° 12′	1.4095	32.77	32.21	— .56
118—120	52° 15′	1.4151	37.34	36.82	— .52
134—136	50° 53′	1.4250	42.12	41.42	— .70
160—162	48° 35′	1.4372	46.60	46.03	— .57
194—196	46° 11′	1.4516	50.78	50.63	— .15
214—216	44° 48′	1.4599	55.22	55.23	+ .01

In this case the relation between the refractive indices, both calculated and noted, come out very closely. The distillates were, no doubt, the right kind for the various refractive indices looked for.

MIYAGAWA.

Distillates. Degrees.	Obs'd Angl.	Refractive Index.	Molecular Weight Calculated.	Refractive Actual.	Difference.
80— 82	55° 0′	1.4106	27.61	29.23	+1.58
98—100	52° 51′	1.4117	32.21	33.14	+ .93
118—120	50° 29′	1.4163	36.82	36.92	+ .10
134—136	51° 55′	1.4261	41.42	41.51	+ .09
160—162	47° 5′	1.4463	46.03	46.26	+ .23
194—196	44° 44′	1.4605	50.63	50.27	— .36
214—216	43° 0′	1.4706	55.23	54.34	— .89
228—230	42° 0′	1.4765	62.58	61.57	—1.01

The results show that the molecular weight was greater than that calculated for:—

KUSODSU.

Distillates. Degrees.	Obs'd Angl.	Refractive Index.	Molecular Weight Calculated.	Refractive Actual.	Difference.
194—196	45° 15′	1.4437	50.63	48.93	—1.70
214—216	44° 36′	1.4618	55.23	54.25	— .98
228—230	43° 48′	1.4659	62.58	62.40	— .02

The above results show that the actual molecular weight of the distillates from the Kusodsu petroleum were invariably smaller than those calculated for.

By comparing the above results from the distillates of the Japanese petroleums, the Amaze oil showed the highest refractive indices, while the Hirei was the smallest.

Again, the molecular weight found was the highest in the Amaze and Miyagawa oils, while the Hirei showed the smallest.

COMBUSTION OF AMAZE DISTILLATES.

The combustion was effected before the molecular weight and refractive indices were ascertained, to find out what proportion of carbon and hydrogen were contained in the distillates and the series of hydrocarbons to which the Japanese petroleum belong was proved.

The distillates used for this purpose were those of Amaze crude only; also the higher distillates and solid hydrocarbons were examined in connection with the combustion to find out the nature of solid hydrocarbons and the relation of these and hydrocarbons of high distillates.

The results will be found in the following table:—

Distillates. Degrees.	Quantity Grains.	Am't H2O Found.	Am't CO2 Found.	Per cent. of H.	Per cent. of C.
80— 82	.1897	.2294	.5923	13.56	85.14
98— 99	.1347	.1721	.4221	14.20	85.45
118—120	.1406	.1812	.4378	14.33	84.27
134—136	.1528	.1920	.4805	14.29	35.76
160—162	.2055	.2556	.6445	14.05	85.50
194—196	.1612	.2025	.5026	13.96	85.35
214—216	.1875	.2451	.5879	14.52	85.51

The above results show that in the lower distillates the average percentage of carbon and hydrogen were 95.45 per cent. and 14.27 per cent. respectively. The average percentage of carbon was taken (with the exception of the distillate) between 118—120 deg., as there was no doubt that the loss of carbon took place during combustion.

While the theoretical calculation for carbon and hydrogen is CnH2n or 85.71 per cent. and 14.29 per cent. respectively, the conclusion arrived at is that the lower hydrocarbon of Amaze crude belongs unquestionably to CnH2n series.

The combination of higher hydrocarbons was also obtained with the Amaze distillate. The samples were the distillate between 300—350 deg. and under 50 mm. pressure.

But the first thing was to treat the mixture with H2SO4 and KOH. Then the liquid and solid hydrocarbons were completely frozen and filtered, then separted as much as possible. The solid hydrocarbons were purified by washing with 60 deg. gasoline, which was evaporated afterward by vacuum distillation. Both liquid and solid hydrocarbons were thoroughly dried

The solid hydrocarbons had a melting point of 57 deg. C., with a specific gravity of .8229 at 20 deg. The combustion test showed the following results:—

LIQUID HYDROCARBONS.

Comb'n.	Quant. in grains.	Amt. H2C.	Amt. CO2	P. c. of C.	P. c. H & C.	T't'l of
No. 1	.1518	.1784	.4840	13.06	86.94	100.00
No. 2	.1662	.1943	.4573	14.77	85.30	100.07

The above results, though not very similar in the percentage of H and C, show that the liquid hydrocarbons belong to CnH2n instead of CnH2n+2.

SOLID HYDROCARBONS.

Comb'n.	Grains.	H2O.	CO2	P. c. H.	P. c. C.	Total P. c. C & H.
No. 1	.1760	.2346	.5499	14.81	85.21	100.02
No. 2	.1553	.2047	.4828	14.68	84.80	99.48
No. 3	.1654	.2233	.5161	15.00	85.03	100.03

These results showed the average percentage of hydrogen and carbon 85.12 deg. (except No. 2) and 14.89 per cent., while theoretical calculation for C26H54 and C25H52 are 85.24 per cent. for carbon, 14.76 per cent. for hydrogen and 85.26 per cent. (C 14.74 per cent. H) respectively.

The conclusion is thus easily reached that the solid hydrocarbons belong either to C25H32 or C26H54 of the CnH2n of paraffin series, rather than to any other series.

The examinations of combustion and the molecular weight of the higher hydrocarbons from the Amaze crude under 30 mm. pressure were also made. The solid and liquid hydrocarbons were purified and separated in the same manner as before, but owing to the limited quantity the further determination was unable to be effected other than shown in the following table:—

COMBUSTION OF SOLID HYDROCARBONS.

Distillate between 250-260 under 30 mm. pressure.

Comb'n.	Quant. Grains.	Amt. H2O.	Amt. CO2	P. c. H.	P. c. C.	Total P. c. H & C.
No. 1	.1539	.2062	.4822	14.89	85.45	100.34
No. 2	.1589	.2128	.4973	14.88	85.35	100.23

The results prove that the solid hydrocarbons belong to the CnH2n 2 series, and not to the CnH2n.

MOLECULAR WEIGHT.

By Boiling Point Method.

Sample No. 1	Solid hydrocarbon	265-270
Sample No. 2	Liquid hydrocarbon	225-240

	Actual.	Calculated.	Difference.
No. 1	366	367 for C26H24	1.0
No. 2	344	350 for C25H50	5.0

Thus the higher hydrocarbons in the Amaze crude, taken in the same temperature, are a different series of hydrocarbons; that is, the solid hydrocarbons are wax of the paraffin series, while the separated oil belongs to the olefine series.

SPECIFIC GRAVITY OF THE SOLID HYDROCARBONS.

The samples were from Amaze crude. The results were:—

			Sp. gr.
No. 1	225-230	(30 mm.)	.8776 at 20°
No. 2	250-260	(30 mm.)	.7943 at 70° .7929 at 80° .7918 at 90°

For comparison, the results made by Dr. Mabery on the specific gravity of Pennsylvania paraffin wax are given:—

			Sp. gr.
No. 1	240-242	(50 mm.)	.8202 at 20°
No. 2	272-274	(50 mm.)	.7984 at 60° .7966 at 70° .7947 at 80°
No. 3	292-294	(50 mm.)	.7977 at 60° .7956 at 70° .7943 at 80°

The result showed that the paraffin wax from the Japan petroleum has a specific gravity similar to that of Pennsylvania.

MELTING POINTS OF SOLID HYDROCARBONS.

The samples were from the Amaze petroleum, which was purified thoroughly after separation from the crude distillates, and gave the following results:—

			Melting point.
No. 1	220-225	(30 mm.)	63°
No. 2	230-240	(30 mm.)	64°
No. 3	250-260	(30 mm.)	68°
No. 4	265-270	(30 mm.)	70°

The percentage of solid hydrocarbon separated from the Amaze distillates was as follows:—

Paraffin. Degrees.	Distilled at	Weight of Dist. in Grains.	Wax Separated.	P. ct. of Wax.
220—230	(30 mm.)	8	.040	.50
230—240	(30 mm.)	13	.084	.65
240—250	(30 mm.)	22	.279	1.27
250—255	(30 mm.)	23	.296	1.29
255—260	(30 mm.)	23	.339	1.30
260—265	(30 mm.)	30	.450	1.50
265—270	(30 mm.)	25	.360	1.52

The result showing the least percentage of wax was found in the lowest distillation 220 degrees-230 degrees, which amounted to 0.50 per cent, while in the highest it was 1.52 per cent. for the wax. The average percentage is therefore 1.14 per cent.

The difficulties were in separating wax from the distillate—that is, even a careful method failed to do it completely. The separated oil, therefore, certainly contains more or less wax. The percentages given above do not show the definite quantity of wax found in the Amaze crude, but give a good idea of it.

The Tiona crude of Pennsylvania, it is said, contains about 2 per cent. of wax.

NITRATION.

The object of this examination was to ascertain whether nitration would bring out some nitro compounds, and prove whether the Japanese petroleums contain aromatic hydrocarbons or not. The limited quantity of the crudes and the shortness of time prevented any further determination than from the following points:—

(1) In which of the Japanese petroleums are aromatic hydrocarbons contained? (2) What description of aromatic hydrocarbons are they? and (3) What kind of nitro compounds would result from nitration?

The nitration was effected by taking the different distillates already dried, and by treating them with H2SO4 and HN. O3 mixed in the proportion of 150 parts to 100 parts respectively. The results are given below.

Kusodsu and Koguchi.—The different distillates between 160 degrees-200 degrees were tried by nitration. Each time a considerable heat was produced, but no nitro compounds with benzole series was found in these oils. On the contrary, a solid, sticky mass of fluorescent, yellowish color was found after the process was over, as if it were an oxidized product of turpentine.

Therefore, it may contain hydrocarbon compounds of the turpene series (C10H18), though this was not proved.

The Amaze, Hirei, Katsubo, Kitatany and Miyagawa petroleums gave pure nitro compounds, though it was variable in percentage, according to the crudes, and the different distillates of the same to the crude. The percentage of nitro compounds was not accurately ascertained, but, generally speaking, Amaze petroleum contained the largest amount of aromatic hydrocarbons, while the Miyagawa, the Katsubo, the Hirei and Kitatany come in the order named according to their contents of aromatic hydrocarbons.

The hydrocarbons in the Japanese crude were mostly toluol, while benzole and xylol came next in proportion, while cumol and cymol were found in but small quantities, or none at all.

The varying amount of aromatic hydrocarbons contained in the petroleums was increased from benzole to toluol, whence it makes an abrupt decrease down to cumol, and left hardly any trace of cymol.

The nitro compounds made by this

Crown Acme Oil

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nitration had two different physical appearances, one in a fine crystalline form of needles, and the other a heavy liquid at ordinary temperature, that is di- and mono-nitro compounds. The color of the two nitro compounds also differed, the crystalline nitro compounds having either a faint yellowish white shade, or very slight tint of red in the yellowish ground.

The Amaze distillate between 80 degrees-82 degrees gave fine crystals of needles with a faint yellowish shade. After the purification and the recrystallization with alcohol and ether, the nitro compound showed a melting point of 115.5 degrees, and 22.0 per cent. for the percentage as to the amount of the distillate. The compound belongs to di-nitro benzole. The distillate of the same petroleum at between 110 degrees-115 degrees gave a crystalline nitro compound which melted at 70 degrees. This was proved to be di-nitro toluol. The percentage was about 24.44. The distillates at between 135 degrees-140 degrees and 170 degrees-175 degrees produced a heavy nitro compound of reddish yellow liquid. This must be a mono-nitro compound belonging to xylol and cumol. The percentage of the nitro compound produced by the last distillate varies from 46 per cent., 10 per cent, 3 per cent. respectively. The nitration gave nitro-compound of the mono-series from the distillate 180 degrees-190 degrees in the proportion of 21.68 per cent., but the nature was not proved.

Hirei.—The distillates between 100 degrees-115 degrees gave mono-nitro compounds to the extent of about 5 per cent., while that of the distillate between 135 degrees-140 degrees gave di-nitro compounds of fine needles whose melting point was 92 degrees, proved to be a di-nitro xylol compound.

Miyagawa.—The distillate between 100 degrees-110 degrees gave a di-nitro compound whose melting point was 61 degrees. This was proved to be di-nitro toluol, about 4 per cent. of this nitro compound being given.

The distillate between 120 degrees-140 degrees gave about 4 per cent. of the mono-nitro compounds, and the distillates between 150 degrees-160 degrees gave about 5.5 per cent. of same, but any further determination was not done.

Katsubo.—One distillate between 100 degrees-110 degrees was tried for nitration, which gave di-nitro compounds; the melting point was 58 degrees. This was proved to be a di-nitro toluol compound. The largest quantity of nitro compounds was made out of this distillate, which was 40 per cent.

Kitatany.—The distillate between 110 degrees-115 degrees was tried. It gave fine crystals of needles. The melting point was 62 degrees, proving the compound to be di-nitro toluol. The amount of nitro compounds was 2 per cent. only. The crystals of this nitro compound had a pinkish yellow color.

OXYGEN COMPOUNDS.

Any proof showing the existence of oxygen compounds in the Japanese petroleum was not attained by this research, although it was tried on several crude distillates of a few crude oils such as those of Kusodsu and Koguchi.

CONCLUSION.

The preceding investigations into the chemical composition of Japanese petroleums proved the following points:—

1. All the seven petroleums belong to the hydrocarbon of the methylene series (CnH20).

2. The gravity and refractive indices specially showed that the Japanese petroleums contain most of the hydrocarbon of the methylene or naphthene (according to Markovinikoff) group of the ethylene series, rather than actual ethylenes.

3. Probably the very heavy oils may contain hydrocarbons, with two or more rings of a methylene nature.

4. Two out of seven petroleums contained parffin wax of solid hydrocarbons.

5. The percentages of sulphur and nitro compounds are generally high, varying from 23 per cent. to 83 per cent. of the former and from 35 per cent. to 1.34 per cent. of the latter.

6. The coefficient of expansion of the crudes are variable, being from 615 to 825.

7. The calorific powers of the crudes are higher than any of the American or Russian petroleums.

8. The presence of aromatic hydrocarbons in the five petroleums out of seven is proved. Those which were not proved for the presence of aromatic hydrocarbons are the Kusodsu and the Koguchi crudes. The amount of aromatic hydrocarbons was proved to range from 1 to 40 per cent. Most of the aromatic hydrocarbons belong to benzol, toluol and xylol, than to the high benzol groups.

9. No oxygen compounds were proved to exist in the Japanese petroleums in this examination.

10. The results of the examinations proved that the chemical nature of the Japanese crudes more resemble the Russian and Californian petroleum than the Pennsylvania and other American oils.

Boring Machinery in Petroleum Mining.*

By A. FAUCK.

At the outset petroleum was obtained by sinking small wells, this method being formerly in great vogue in Galicia; but at the present time boring machinery is almost exclusively employed, and on this account a review of the various methods of boring practiced may be of particular interest to producers of oil.

The methods used in the principal oil regions discovered in succession are of very different types, and the oil fields of Pennsylvania, Canada, Baku, Galicia, Alsace and the Dutch Indies afford us opportunities of becoming acquainted with the main kinds of boring machinery. In Pennsylvania the American cable system is used exclusively, and has answered expectations, owing to the favorable stratigraphical conditions prevailing there. It is the simplest of all boring rigs, the bit being suspended from a cable which at the top is held by a temper screw and is raised and lowered by means of suitable driving mechanism. A "jars" is inserted between the cable and the bit, and 50 to 70 strokes a minute are imparted to the latter, the thrust being 20 to 30 inches. The bit can be lifted very quickly out of the borehole, which is then easily cleared by a sand pump, also lowered by cable.

In Canada the method is similar, except that rods are used to replace the cable. In point of speed, this method cannot compete with cable plant, and it is only in point of ease in handling that it is superior to the latter, the art of cable drilling requiring great skill, intelligence and experience, whereas the rod system is more easy to supervise and regulate. In addition, the lifting arrangements are very simple and appropriate.

In Baku highly divergent methods are in use, more especially free-fall instruments of various kinds; the American cable system, the Lenz cable free-fall instrument and the Fauck automatic free-fall and so-called "rapid" method are also employed.

The cost of drilling in Baku is very high, owing to the large diameter of the boreholes, which have to be 24 inches wide at the top and 12 to 16 inches at the bottom. These dimensions are necessitated by the presence of so much fine sand accompanying the oil and entailing the use of the sand pump for raising the latter. Both the boring and the baling in such large holes are expensive; more particularly because the casing is easily flattened in such large holes at great depths. On this account it would be preferable in Baku to bore smaller holes, but use stronger casing and improve the method of raising the oil, there being no security against the caving in of the casing under existing conditions.

In Galicia the hand free-fall borer was the first used for well drilling, and the author afterward introduced the cable system from Aemrica, but could not use it except under personal supervision; consequently he brought out his improved free-fall borer, with which the men were soon able to do good work. Later on the Canadian system was brought over by MacGarvey, and greatly improved by him. More recently the new Fauck "Rapid" system has come into use in Galicia, and has proved highly efficient in comparison with other methods. In Alsace the oil deposits are easily accessible and the wells are mostly sunk by "water-flush" methods.

In the Dutch Indies all kinds of boring plants are used, but the author's new "Rapid" system appears to be the most widespread. At first it had many opponents, owing to the idea that such a small stroke (2 to 3 inches) without "jars" would not answer. Nevertheless, experience has proved that this small stroke is extremely efficient in conjunction with a water-flush, since the full effect is secured to each stroke, whereas with a longer stroke the water in the borehole is unable to get away from the falling bit with any velocity, and, therefore, hinders the descent of the tool and lessens the force of the blow.

Theoretically, as the author has demonstrated in his publications for several years, short strokes give a relatively high efficiency of percussion, since in the case of a 2-inch stroke the final velocity is 40 inches, i. e., twenty-fold the height of the stroke, while, on the other hand, a 40-inch stroke only gives a final velocity of 180 inches, or 4½ times the length of the stroke. The actual efficiency of the short stroke system is thus theoretically demonstrated, though some boring experts doubt its usefulness, the matter appearing so simple in their eyes.

The success attained by this system has induced the author's son to improve it still further by perfecting the percussion and water-flush appliances. These new devices are the logical result of a new departure in boring technology. That they were not brought out before is due to the circumstances that:—

1. Formerly no one would admit the possibility of drilling through hard rock at depths exceeding 600 metres with a bit attached direct to hollow rods without "jars," or other intermediate apparatus; and because

2. It was believed that the diamond drill formed the ne plus ultra of drilling plant.

Both these assumptions have now proved incorrect, since it is found that the expansion of the rods, instead of being, as was formerly supposed, an irremovable obstacle to the application of direct action, really is the means of enabling, by the elasticity of the rods themselves, the appliance to penetrate to great depths, provided the parts are properly arranged. In addition to the bit and the heavy sinker bar, only the lower part of the length of rods comes into action, even when the entire set is allowed to fall; hence precautions must be adopted for ensuring that only the lower part of the rig exerts a percussive effect; the upper part of the rods must be held fast and then the elasticity of same develops its full effect, in that during the down stroke obstruction and dispersion are prevented, and the reversal of movement for the upstroke is facilitated at the commencement of the change, the rod-tension necessary for raising the bit being undisturbed by the percussion, but left constant. In the newest method the weight of the rods is counterbalanced by springs, and a quicker stroke than ever is ensured.

Moreover, in consequence of the improved arrangement of the cutting edges of the bit and the water-flush, the sole of the borehole is treated in a different manner than heretofore. The edges are varied in extent, according to the nature of the rock, and the water-flush always impinges vertically on the sole, so that the latter is kept clear of detritus, without the flush jets having to be reduced in size. These novelties greatly increase the efficiency of the apparatus.

The under-reamer for widening the hole consists of a fixed cutting tool on the one side, and an adjustable disc on the opposite side, so that the under-reamer, which bores and widens the hole at one operation, is less subject to wear than before. At the same time the cores can be broken off automatically to any convenient size and brought to the surface by means of the flushing water while the apparatus is working.

By this new form of bit the sole of the borehole is attacked in a more rational manner than hitherto, the flush being delivered right on to the sole, and the bit being more effective in action.

In the diamond and other core drills, the recovery of the core is always impeded by the necessity for using core catches for breaking and retaining the core; but with the new method the core can be broken off automatically in any required length and forced up by the flush water. To attain this object the usual form of bit had to be replaced by another, which is simpler, inasmuch as there is only one large orifice for the flush water, instead of two small ones; and although the cutting edge is directly interrupted by the water channel, the sole is, nevertheless, completely worked.

On the one side the cutting edge of the bit remains intact from the centre to the outside, but on the other side only a small length of cutting edge is left, the flushing channel being between this and the centre. This break in the cutting edge offers great advantages by increasing the bite of the drill and ensuring a perfectly clear flush.

The following results are obtained by the new method:—

1. The possibility of reaching any depth at which a good set of rods will support its own weight, and at the same time of obtaining cores without the diamond.

2. Boreholes with diameters from 24 to 2 inches have been driven with the apparatus.

3. Perfect and reliable under-reaming below the casing.

4. The method can be worked by hand, steam, or other motive power.

5. The speed obtainable is good, and may exceed 6 meters per hour, 5 meters having even been drilled in that time by hand.

*A paper read at the Petroleum Congress, Paris Exposition, from the Petroleum Review.

FOREIGN MAILS

The following table gives the date and time of closing the mails for foreign countries at the New York Postoffice. A star indicates that letters may be addressed per steamer named for the countries indicated. A dagger indicates that registered mails close at 6 p. m. on the previous day. In case of mails via steamers from Pacific ports the hour of closing is up to the date specified.

After the closing of the supplementary transatlantic mails named below additional supplementary mails are opened on the piers of the American, English, French and German steamers and remain open until within ten minutes of the hour of sailing of steamer.

Mails for—	Steamer.	Date.	Mails close at P. O. Regular.	Suppl.
North Brazil	Polycarp	Nov. 13..	2 p. m..	—
Europe, via Southampton and Bremen	Kr. M. Theresia.	Nov. 13..	7 a. m..	—
Jamaica (from Boston)	Adm. Farragut	Nov. 13..	9 p. m..	—
Central America (except Costa Rica), and South Pacific ports	Finance	Nov. 13..	9.30 a. m..	10.30 a. m.
Europe, via Queenstown	Germanic	Nov. 14..	9 a. m..	10.30 a. m.
Europe, via Southampton	St. Louis	Nov. 14..	7 a. m..	9 a. m.
Belgium	Southwark	Nov. 14..	10.30 a. m..	—
Cuba, Campeche, Yucatan, Tabasco and Chiapas	Orizaba	Nov. 14..	1 p. m..	—
Bermuda	Pretoria	Nov. 14..	8 a. m..	—
Yucatan	Mercator	Nov. 14..	11 a. m..	—
Porto Rico	U. S. Transport	Nov. 14..	11 a. m..	—
Europe, via Hamburg	Aug. Victoria	Nov. 15..	6.30 a. m..	—
Jamaica (from Philadelphia)	Admiral Schley	Nov. 15..	2.30 a. m..	—
France, Switzerland, Italy, Spain, Portugal, Turkey and Br. India, via Havre*	La Champagne	Nov. 15..	6.30 a. m..	—
Pernambuco and Santos	Catania	Nov. 15..	11 a. m..	—
Italy, direct*	Fr. Bismarck	Nov. 17..	9 a. m..	—
Denmark, direct*	Island	Nov. 17..	12 m..	—
Argentine Republic, Uruguay and Paraguay	Etona	Nov. 17..	8 a. m..	—
St. Thomas, St. Croix, Leeward and Windward Islands	Madiana	Nov. 17..	9.30 a. m..	10 a. m.
Netherlands, direct*	Maasdam	Nov. 17..	8 a. m..	—
Europe, via Queenstown	Lucania	Nov. 17..	8.30 a. m..	10 a. m.
Fortune Islands, Jamaica, Savanilla, Cartagena and Greytown	Athos	Nov. 17..	10 a. m..	10.30 a. m.
Porto Rico, Curacao and Venezuela	Philadelphia	Nov. 17..	10 a. m..	10.30 a. m.
Cuba	Mexico	Nov. 17..	11 a. m..	—
Haiti	Adirondack	Nov. 17..	10 a. m..	10.30 a. m.
Matanzas, Nuevitas, Gibara and Baracoa	Curityba	Nov. 17..	1 p. m..	—
Australia (except West Australia), Hawaii, Fiji Islands, via Vancouver	Aorangi	To Nov. 10..	6.30 p. m..	—
China and Japan, via Vancouver	Emp. of China.	To Nov. 27..	6.30 p. m..	—
‡Australia (except West Australia), New Zealand, Hawaii, Fiji and Samoan Islands, via San Francisco*	Sierra	To Nov. 16..	6.30 p. m..	—
Hawaii, China, Japan and Philippines, via San Francisco	China	To Nov. 15..	6.30 p. m..	—
Hawaii, via San Francisco	Zealandia	To Nov. 5..	6.30 p. m..	—
Hawaii, China, Japan and Philippines, via San Francisco	Doric	To Nov. 23..	6.30 p. m..	—
China, Japan and Philippines, via Tacoma	Victoria	To Nov. 12..	6.30 p. m..	—

‡After No. 11.

DRUG MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on pages 39 and 40.

Saturday Evening, Nov. 10, 1900.

ADVANCED.	DECLINED.
Opium, gum, 13½c.	Cinchonidia, 2c.
Opium, powdered, 20c.	Cocoa butter, bulk, 1c.
Lycopodium, 1c.	Manna, small flake, 2c.
Thymol, 25c.	Rio ipecac, 25c.
Oil, sweet birch, 25c.	Caraway seed, ¼c.
Damiana, 1c.	Hemp seed, ¼c.
Hemlock oil, 1c.	
Spruce oil, 2c.	
Rape seed, domestic and English, 1½c.	

London closing prices on page 36.

Opium.

Strong advices continue to arrive from Smyrna. Drought continues and demand is active. The total advance amounts to 2d. The New York market is also stronger and holders have advanced their views to $3.40 for case lots. No business has been done at that figure. Early in the week upward of ten cases sold in case lots at $3.30 and toward the close there was further inquiry at that figure with nothing obtainable. Broken lots have been in fair demand. At the close the range is $3.40@3.50, as to quantity. Powdered opium has scored a substantial advance. The former cheap sellers have advanced their views to $4.40 in case lots, but there are other sellers who quote $4.30 for similar quantities. Up to $4.50 is asked as to quantity and test. For some time past powdered has been selling low compared with the gum, and present quotations are on a more equal footing. Our cables follow:—

(From Correspondent A.)

Smyrna, Nov. 9, 1900.

There have been sales at 9s. 6d. for current druggists'. The market is rising. Prospects for the crop are very disheartening.

(From Correspondent G.)

Smyrna, Nov. 10, 1900.

Sales amount to 55 cases. Market, 2d. higher. Drought continues.

(From Correspondent D.)

Constantinople, Nov. 9, 1900.

Sales of the week were 24 cases. Nallychan at 9s. 2d.; 10 cases Balukesser at 9s. 4d.@ 9s. 5d.; 10 cases druggists' and 11 cases Karahissar at 9s. 6d.; 5 cases prime Karahissar at 9s. 8d. The weather is not favorable to the crop, and prices are advancing.

Our mail advices follow:

(From Correspondent C.)

Smyrna, Oct. 20, 1900.

Our opium market continues very firm, and buyers had the greatest difficulty to close about 20 cases at last paid price of 8s. 9d., c. i. f. The chief holders preferred awaiting further developments. Yesterday a speculator bought 5 cases at 8s. 10d., c. i. f., for the usual druggists' grade. A little rain has fallen this week in some parts of the interior, but that has proved quite insufficient to allow of the autumn sowings being made. This circumstance, coupled with the hope of a revival in the demand from China, imparts its present firmness to the market.

Receipts, 3,190 cases, as against 1,985 last year.

(From Correspondent D.)

Constantinople, Oct. 26, 1900.

This week business was very active, with advancing prices. The sales are : Ten cases Nallyhan at 8s. 10d., 5 cases Bel Basar at 8s. 11d., 3 cases Nallyhan at 8s. 11½d., 5 cases Eski Sheyir at 9s. 1½d., 1 case secondary at 8s. 5d., all druggist; 3 cases Balukessar at 9s. 1½d. to 9s., 6 cases Karahissar at 9s. 1½d. to 9s. 5d., and 5 cases Pokat at 10s. 6d.

There are still buyers in the market. As usual in this season, the Anatolians say that the weather is not favorable to the sowing.

(From Correspondent E.)

Constantinople, Oct. 26, 1900.

There has been continued demand during the past week, principally speculative, and owing to increasing drouth risks. Sales amount to 45 cases druggists at 9s. and Karahissars at 9s. 3d., f. o. b. There are further buyers at these prices, but sellers are very reserved.

Morphine.

There is a good demand for morphine and prices, which have been ruling firm for some time past, have been further strengthened by the upward tendency of opium. The quoted range is $1.90@2 an ounce for bulk.

Codeine.

Demand is rather slow, but the market rules steady at $4.25@4.40 an ounce for bulk in 10-ounce lots.

Quinine.

On Monday morning the trade received an announcement that P. & W. brand had been reduced. All brands, both foreign and domestic, are now quoted at 35c. for bulk by the manufacturers or their agents. Outside holders quote 34@34½c. for bulk, but the inside figure could probably be shaded for a firm offer for a round lot. Demand is slow, but the market has a fairly steady tone. Java quinine is slow of sale at 33½c. for bulk. The 124 cases which we reported had arrived last week contained 49,600 ounces.

Cinchonidia.

Several manufacturers have reduced their published quotations to 30c. But there is really no change in the situation, as there have been sellers at 29c. and 30c. for some time past.

Miscellaneous.

ACETANILID.—A limited quantity is still obtainable from second hands at 23c., but manufacturers are firm at 24c. in barrel lots. It is understood that contracts at low prices with second hands will run out within about a month, when manufacturers' quotation of 24c. will be inside.

ACID CARBOLIC.—Demand is less active than was the case a month ago. London advices report crude in that market somewhat lower. In this market crystals are held on the basis of 25c. for drums, but the upward tendency of prices is less pronounced.

ACID CITRIC.—There is practically no Sicilian on spot and any quotation would be nominal. Domestic is firmly held at 40@41c. by manufacturers, but 39@40c. will buy in a limited way from outsiders. Our correspondence follows:

Messina, Oct. 24, 1900.

Our market the past ten days has been very quiet and no sales of either concentrated lemon juice or citrate of lime are reported. The price for prompt shipment has gone down from £17 5s., cost and freight, to £16 15s. But even at this reduced figure there is no demand and, considering that citric acid in London is very weak, our holders of juice and citrate of lime will have to lower their views if they desire to free their hands of their present holdings.

The weakness of prompt merchandise will influence the price of new crop production, and manufacturers of citric acid had better wait before they place their December-June delivery orders.

BEESWAX.—Demand is slow, but the market has a firm tone, due to the limited available supply. We hear of no lower quotation than 28c. for ordinary country run. Up to 32c. is asked for yellow, as to quantity and quality.

BISULPHIDE OF CARBON.—This product has been out of the market for some time past, but is now being offered again at 9½c. Our information leads us to believe that the scarcity is now at an end and that in the future supply will be equal to the demand.

CARNAUBA WAX.—No. 1 and No. 2 rule steady as previously quoted. There is a fair jobbing demand and no stocks are pressing on the market. No. 3 is irregular and there have been sales at 13½c., though it is doubtful if 14c. could now be shaded. Stocks are being reduced quite rapidly, though there is considerable in sight as yet. There have been no arrivals of consequence of late and Brazil advices vary. Some time ago advices stated that the entire crop had been marketed, but recently small quantities have been offered. It is not thought, however, that any great quantity is available.

CHLORAL HYDRATE.—There is a good, steady consuming demand and prices rule firm at $1.20@1.25 for crusts and $1.25@1.30 for crystals.

COCOA BUTTER.—A decline was scored at the Amsterdam and London auctions on Tuesday. The decline amounted to about 10 per cent. and is discussed editorially on another page. Prices in this market are easier, but irregular. Some holders ask 42c. for bulk, but a firm offer of 41c. would

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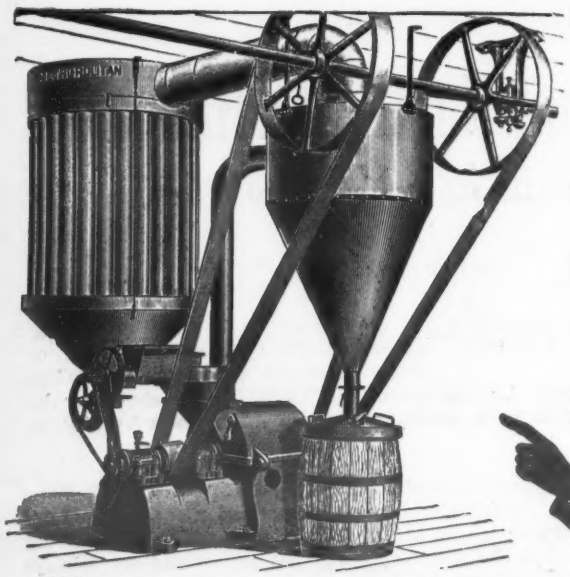

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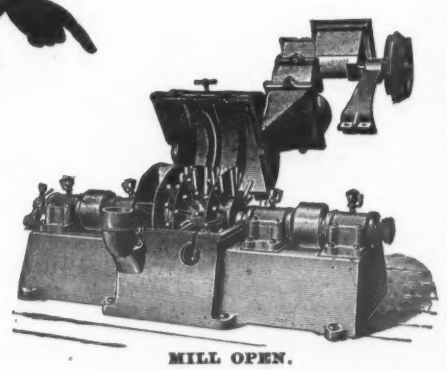

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probably buy in some quarters, as to brand. Box butter is quiet at 47@49c., as to quantity and brand. Our cables follow:

Amsterdam, Nov. 6, 1900.

At the cocoa butter auction held here to-day the average price realized was 90% Dutch cents per half kilo.

London, Nov. 10, 1900.

At the cocoa butter auction on Tuesday the average price paid was 18 3-16 pence per pound.

CODLIVER OIL.—The market rules dull, but holders are not inclined to shade prices to induce business. The quoted range is $24.50@26, but $24 will probably buy in some quarters. Our cable, which follows, reports a decline of over $1 a barrel in Bergen. As yet the report has had no influence on this market, though a change is liable to occur at any time.

Bergen, Nov. 9, 1900.

Prime Lofoten oil has declined to $17 f. o. b., and further declines are expected.

CUTTLEFISH BONE.—This market rules steady at unchanged prices and foreign advices are strong. The principal holders quote on the basis of 26@27c. for prime Trieste bone, but there is one holder who is willing to sell in a limited amount at 23c.

ELATERIUM.—The market continues to rule very strong because of the small stocks both here and abroad. The spot price is $9 a pound. Our correspondence follows:

Malta, Oct. 23, 1900.

Elaterium essence is very scarce at 1s. 6d. per ounce c. i. f. London or New York.

ERGOT.—We report sales of 100 and 200 pound lots of Russian at 55c. That figure will still buy limited quantities, but no larger lot is offered at any price. Hamburg is decidedly firm and cables quote 56c. c. and f. New York for December shipment. Our correspondence, which follows, describes the situation very fully. Spanish ergot has sold on spot at 60c. A small lot can still be had at that figure, but 65@70c. is the general quotation. Hamburg is decidedly firm. Our cable follows:

Hamburg, Nov. 10, 1900.

The market for ergot is rising fast. Spanish is held at 58½c. c. & f. New York.

A correspondent writes to the following effect:—

Hamburg, Oct. 26, 1900.

Ergot of rye has now reached a point where it is worthy of extended consideration. Only a few weeks ago the value in this market was 270@280 marks per hundred kilos, and the market had the appearance of a further decline, everybody fearing the new crop, and some houses quoted low prices in an effort to depress the market. Suddenly it became known, however, that this year's crop was to be considered an almost certain failure; and as stocks of last year's crop were very low the market at once began to show signs of advancing. Orders over orders came in and the improvement of values was rapid. Nothing could stop the advance, and in spite of all endeavors of the aforesaid "bears" we reached a price of 450@455 marks for Russian and 465@470 marks for Spanish. The before mentioned circumstances even supported the movement, and, although we cannot deny that there was some speculative impulse, this improvement is justified in every regard, for, after the most extensive inquiries throughout the interior of Russia, we are fully convinced that there is a great scarcity to be recorded. It is true, as alleged by some parties, that we are not yet in the right season for this article, and that gathering only begins in the winter season. We must remark, however, that the present high values are an important factor for the regulation of these assertions, and they are too tempting for the gatherers, who are very likely to neglect all other things in order to avail themselves of to-day's values for ergot.

Spanish ergot is in a very similar position, although this kind must be considered as exhausted on spot, and 465@470 marks could be readily obtained at the moment. As a matter of fact, small quantities will arrive from time to time in the market, but what are perhaps one or two tons for the world's yearly consumption? However, we shall probably see a certain stagnation, as always follows heavy excitement, but the general tendency will be steadily upward, and it certainly appears advisable to provide in due time, as it is very likely that values of 500 marks or more are to be expected, just as last year.

GLYCERINE.—A good business is doing in C. P. at full quotations, which range on the basis of 15c. for drums. We call attention to an editorial on another page.

HOPS.—Brewers are beginning to place fairly liberal orders and a very good business is reported by dealers. There is no change in the situation up the State. Reports from all producing centers indicate continued firmness in the views of sellers. The Pacific Coast markets, which were slightly inclined to weakness at the beginning of the week, have stiffened up again, and bids on considerable quantities wired from here have been turned down. Spot quotations follow:

New York State—1900, choice.....	20	@ 21
1900, prime	17½	@ 19
1900, medium	16	@ 17½
1899	11	@ 15
1898	5	@ 9
Olds	2	@ 6
Pacific Coast—1900, choice	18½	@ 19½
1900, prime	17	@ 18½
1900, medium	15½	@ 17
1899	11	@ 15
1898	5	@ 8
Olds	2	@ 6
German, etc., crop of 1899	35	@ 40

JAPAN WAX.—We hear of further sales of 20 case lots at 6½c., but open quotations range 6¾@7c. The market has a rather firmer tone at the close.

LYCOPODIUM.—Politz has sold up to 65c. and that figure is now inside for a very limited quantity. Unlabeled was practically out of the market, but a fresh arrival is now available at 57@60c. Hamburg is decidedly strong. Our cable, which follows, describes the situation in that market:—

Hamburg, Nov. 8, 1900.

There is only a small stock of lycopodium on hand, for which 49½c., c. f. New York, is quoted.

HAARLEM OIL.—The market has a firmer tone, but there are still sellers at $2.18 (old style, stamps included), notwithstanding some sellers have advanced their views to $2.30. The supply is not overplentiful, and, as foreign markets advanced some time ago, higher prices seem warranted.

MANNA.—The market for manna has an easier tone. Owing to the slow demand, sellers have reduced their views on small flake to 58c. Up to 70c. is quoted for choice quality.

MYRBANE OIL.—Foreign advices continue very bullish and importers quote cases at 9@10c., and drums at 8@8¼c.

THYMOL.—Previous low sellers have advanced their views to $5, which figure is now inside as far as we can learn.

Balsams.

The entire list is without important change. There is a good, steady jobbing demand in most instances, and prices rule from steady to firm.

Essential Oils.

Citronella is firm at last week's advance to 20@21c. in drums. Hemlock and spruce, which we have reported as tending upward for some time past, are quotably higher at 29@35c. and 28@30c., respectively. Peppermint oil is decidedly firm, though quiet, and the low seller has advanced his views to $1.10 for Western in bulk. Cassia and anise are quiet, but steady in tone at 85c. and $1.45, respectively. Sweet birch is firmer and holders have advanced their views to $1.75@2, as to quantity and quality.

Flowers.

Arnica flowers are decidedly strong. The spot supply is small and there are only small offerings from abroad. Spot values for prime goods range 10@10½c. Calendula are also firm at 52@55c. for

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new and 48@50c. for old crop. Our cable follows:—

Trieste, Nov. 10, 1900.

Our market for insect flowers is firmer in consequence of a good demand, and 10½c. c. and f. New York has been paid for open flowers.

Our mail advices follow:—

Trieste, Oct. 27, 1900.

Insect flowers have been in stronger demand since our last report, and rather large quantities have been sold at rising prices. The last sales were effected as follows: Closed at from 20c. to 22c., half-closed at from 13c. to 18c., and open at 10c. The latter quality is held now at 10½c. per lb. c. & f. New York.

Gums.

Camphor continues very firm as previously quoted. Japan refined is practically out of the market for the present. The mucilaginous gums are all in good request and firm.,The better qualities of tragacanth continue to attract particular attention. Our Constantinople correspondence of Oct. 26 reads: "Supplies continue to be moderate and demand is pretty good. In consequence prices are steady." Assafoetida, gamboge and liquid styrax rule firm, as previously quoted. Guaiac is without change as yet, but it is reported that the Legislature at Port au Prince passed a law placing a duty of about 1c. a pound on all exports. The gum is also to be subjected to a surtax at 20 per cent. and 10 per cent. This law was to have become operative on Oct. 1.

Herbs and Leaves.

Coca leaves are quiet. The recent arrival has not been offered on the market and has probably gone into consumptive channels. Prices rule firm as previously reported. Buchu leaves are firmer. A better business is said to have been done in London at a slight advance. Damiana is firmer, because of a small spot stock and strong advices from the coast. Spot quotations for desirable goods have been advanced to 10c., while 11c. is demanded from the coast. Sage, savory, thyme and marjoram are quite active and prices rule steady as previously quoted. Our correspondence follows:

Trieste, Oct. 27, 1900.

The position of sage is unchanged. A rather good business has been done since our last and full prices have been paid. Stocks of horehound are exhausted now. The last small lot that was obtainable here has been sold at the parity of 4½c. per lb. c. & f. New York.

Roots.

Senega is very firm, with most holders refusing to shade 45c., although it is reported that a firm offer of 44c. would buy in certain quarters. Up to 47c. is asked, as to quality. We report a sale early in the week for export at 44c. The Winnipeg Commercial says in regard to this year's senega crop:

The crop of senega root in Minnesota, Dakota, and Western Canada this year is placed at 115,000 pounds. Ninety thousand pounds of this root was produced in Canada.

Golden seal is in a peculiar situation. Nothing is obtainable from the country under 55c., but the same figure will buy spot goods. The supply in sight is small. Mexican sarsaparilla is held at 7¾@8c. ex store and 7½c. ex dock. To arrive the store price can be shaded. New crop squills are arriving and are held at 3¾@4c. A correspondent in Malta writes us that squills are very scarce this year and 2½c. c. i. f. New York is demanded. Rio ipecac is lower in London. Cables quote 10s. 6d. Spot holders have reduced their views and in one instance as low as $2.75 is quoted. No business is reported. Our correspondence follows:

Trieste, October 27, 1900.

White hellebore was in good demand during last week and about 30 tons have been taken from the market. Round lots have been sold at the parity of 3½c., but actually nothing more is to be had at this figure, and for the present moment 3¾c. would be the very utmost price.

Another lot of about 20 tons of belladonna found buyers at 7½c. per pound c. & f. New York. Present stocks are small, but we hear that there are several parcels on the way to Trieste.

The first lots of new colchicum arrived and found buyers at once at the parity of 6½c. per pound c. & f. New York.

The crop of aconite having been a very small one this year, high prices are demanded and prime quality is not to be had this moment under 11c. c. & f. New York.

Seeds.

Caraway seed is quotably lower at 7⅛@8c., as to quantity and quality. The decline is due to a lack of demand. Canary seed is firmer, but quotably unchanged. Celery seed is in jobbing request at 7@7½c., as to quantity and seller. Mustard seed is strong. All kinds are in good request and firm as quoted. Rape seed is not very plentiful, particularly domestic, which is higher at 3@3⅛c. German is also firmer at 3⅛@3¼c. Coriander seed has been quiet since the recent advance, but the tone of the market continues firm. Star anise is dull at the recent decline to 21c. Stocks of hempseed are plentiful, and, as demand is slow, the market has an easier tone at 2⅝@2¾c. Our correspondence follows:—

Malta, Oct. 23, 1900.

The new crop of cumin seed has been a very small one, and much has been shipped to Hamburg. The quality of this year's cumin seed is rather inferior to that of the last two years. Prices must go higher before long. The stock is small. New seed is quoted at 31s. 6d. per cwt. c. i. f. New York. The market is bare of coriander seed. There was no crop of anise seed this year; oil is held at 30s. per cwt. c. i. f. New York.

Sponge.

During the last few days there has been a better demand for sponge and a good business has been done. The trade, generally, anticipates continued activity. Prices rule firm without any quotable change. Chamois are rather quiet, but the tone of the market is firm.

If you are contemplating the purchase of machinery of any kind, and desire to be brought in contact with the different manufacturers, the Oil, Paint and Drug Reporter will be glad to supply full information upon receipt of request.

(Special Cablegram to the Reporter.)

LONDON CLOSING PRICES.

London, Nov. 10, 1900.

Cocoa butter at auction declined, and the average price paid was 1s. 6 3-16d.

Quinine has declined a total of ¾d. the past week.

Shellac has declined to 60s. per cwt. for T. N.

Spot ipecac has declined 1s.

Cardamoms are 3d. lower.

Zanzibar cloves have advanced 1-16d.

Meeting of the New York Section of the American Chemical Society.

The New York Section of the American Chemical Society held its regular meeting at the Chemists' Club on Friday evening, the 9th inst. Dr. C. A. Doremus presided and over fifty members were present. "A Brief Review of Antipyrine and Its More Important Derivatives" was the subject of a paper by D. C. Eccles, and was a very complete sketch of the subject. Referring to the matter of papers to be read before the section during the season, Dr. McMurtrie said that every chemist actively engaged in any subject could bring topics before the section, which would be of great interest to others, and of no less interest because of not being in shape and for publication in the journal. And, further, he urged the members to realize that interesting meetings required that each should furnish his share of the work.

The chairman, Dr. Doremus, said he thought the opportunity of bringing their work before the society was not appreciated by the younger members, who would better seek the opportunity in their own interest than wait for invitation.

Special announcement was then made of the death of Dr. E. R. Squibb, so long an enthusiastic member and active co-worker in the society. Personal reminiscences were given by Dr. Rice and by Messrs. Bogert, McMurtrie, Breneman, Eccles and Doremus.

It was then moved and seconded that

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a committee be appointed to draw up suitable resolutions expressing the society's appreciation of Dr. Squibb's character, of his services to chemical science, and of the loss sustained by the society in his death.

The Indigo Crop.

The following final forecast of the indigo crop of 1900 in the northwest Provinces and Oudh, dated Lucknow, Sept. 26, has been issued by Mr. Freemantle of the India Office. The area given in this forecast is an estimate based, for districts in which there are canals, on the returns published by the Irrigation Department up to the end of July last, and, for the rest of the province, on the preliminary statement received from the village accountants. The comparatively favorable rates obtained in the last year's sales have encouraged sowings this year. The total area sown with indigo has therefore risen to 271,396 acres, an increase of 39,996 acres, or 17 per cent. over the preceding year; but compared with the average areas of the last five and ten years there is a drop of 25 per cent. and 18 per cent, respectively. Since last year a decrease took place of 5,742 acres in Farukhabad, of 1,639 acres in Muttra, and of less than 500 acres each in Saharaupur, Agra, Cawnpore, Allahabad, and Unao. The rest of the important indigo growing districts show substantial increases. When the first forecast was issued, on July 12, the prospects of the crop were good. The character of the monsoon, however, had not then declared itself. During July and the first half of August rainfall was in general deficient and to some extent retarded the growth of the plant. Subsequent falls, however, were beneficial to the standing crop, and a good outturn was expected. But the heavy falls which were received in the Doab towards the end of the season are reported to have reduced the produce of dye. The condition of the crop, therefore, which in the last week of June was reported to vary from 75 to 90 per cent. of the normal, now stands at 62 to 87. The estimated yield of the present year's crop amounts to 47,293 factory maunds, as compared with 26,266 maunds estimated last year, showing an increase of 20,327 maunds, or 75 per cent. The present year's yield, is however, 12 to 7 per cent, respectively below the average estimated yield of the past five and ten years: Doab, 39,142 maunds; Benares, 8,151 maunds. The exports by rail to Calcutta in the period from October 1, 1899, to March 31, 1900, amount to 32,886 standard maunds, of which 28,641 maunds only went to Calcutta, nearly the whole of the rest being consigned to inland places. A similar reduction for the present year must therefore be made in calculating the amount of the dye which these provinces are likely to supply to Calcutta.—London Commercial Record.

The Emba-aspian Petroleum Field *

In 1892 an expedition was sent, under the direction of M. N. Lehmann, by the Riazan Oural Railway Company and the Geological Committee, for the general study of the Oural region, i. e., of all the large zone situated between the Caspian Sea, the Arel Sea, and the Oural River.

One of the objects of the expedition was to study the possible roads and directions for the organization of communications by caravans, carriages, or railway, as well as to study the water resources and mineral wealth of the country, which questions are closely connected.

The first report of this expedition, published in 1893, contained, among other general data which we had obtained, and that which was found in the literature, information about the naphtha and tar and asphalt deposits of this country.

The comparison of all these data demonstrated that the petroleum outcrops are found in two bands. One of these bands, situated more to the east, and distant from the Caspian Sea, extends in a direction about N. W.-S. E. from Fort Onilsk to the Tersakan river, and contains only, so far as is known, only oxidized and condensed products of naphtha, such as the tar which penetrates into the sand and sandstone near the surface.

These petroleum deposits belong to the senomanic epoch, as proved by the fossils and the rocks everywhere covered by layers of the chalk formation, among others of the upper-chalk.

The other band runs in the same direction, N. W.-S. E., parallel to the first, but nearer to the sea occupying the deltas of Ouil, Sagis and Emba. Over the whole area, and in several spots which we have examined, but the number of which is now much greater, outcrops are found not only of tar and oxidized and condensed naphtha products, but also of naphtha. Considering the quantity and quality of the naphtha extracted from diggings at the surface made by the Kirguis, and also from our own borings, Kara-Tchungul deposit to the south deserves special attention.

THE KARA-TCHUNGUL DEPOSIT.

The chemical analysis of the naphtha which was extracted by boring at this spot demonstrated that the naphtha contained 40 per cent. of lamp-oil, and is very similar to Pennsylvania petroleum.

It is exceedingly difficult to determine the epoch of the formation of the Kara-Tchungul naphtha, as well as of all the deposits of the second band, by the mere geological study of the ground, without making careful borings at a great depth.

The strata of this region are not all horizontal, but form more or less irregular overlying beds, which leads to the supposition of the existence of breaks, and considerable deviations in the line of fissures.

On the other hand, the protruding parts of the rocks have been worn and carried off by the Caspian Sea, which formerly extended over the whole of this surface, and has left everywhere horizontal sediments transforming the whole country into a level plain.

Guided, however, by a general knowledge of the country, and by the results of borings, the conclusion was arrived at that the petroleum bearing formations must be older than the upper chalk.

The latest data have entirely confirmed this conclusion, and the Kara-Tchungul naphtha differs very particularly from the Baku naphtha, with which, as we shall see later on, it has nothing in common from a geological point of view, and is distinguishable by the quantity of paraffin contained, and also by its transformations into ozokerite deposits.

From the analogy of the tar deposits in the first petroleum-bearing band, the petroliferous gravels of the second band appeared to belong also to the senomanic epoch.

The most recent soundings at Kara-Tchungul show that we are in the presence of even more ancient petroliferous deposits.

At all events, the researches made during 1892 proved, contrary to the conclusions of predecessors, that the petroliferous formations down the Emba River do not belong to the purely superficial formations in the new Caspian sediments, but to the sediments of older formations than the Caucasus naphtha.

Such was the state of affairs until last summer when Mr. Lehmann undertook serious borings.

The existing data did not permit the forming of an opinion either as to the value of the formations or their extent, their direction or inclination. Now the diaries of the soundings of last year, as well as the samples from the deposits explored during the year 1899, in the seven crevices at Kara-Tchungul, have been examined and studied by him.

That study enabled him to arrive at the following conclusions, which, however, cannot be definitive, none of the borings being yet finished, and several others having still to be made in the same vale of the Kara-Tchungul lake.

1.—The borings 1, 2, 4, 6, and 7, situated nearly south of 1, as well as the boring 3, 100 sagenes east of 1, belong generally to the same geological formation, in which, under the new Caspian sediments of gravel and clay, is found the mass of gypsum clay and gravel, with some deposits of rock-salt of a thickness reaching to 10 sagenes, of ozokerite reaching a thickness of 8 feet, of petroleum-bearing gravels and crystallizing sulphur.

The whole of the series of overlying beds through which boring 1 runs to a maximum depth of 69 sagenes is similar to the series of sediments of gypsum extending, for instance, along the northern side of Lake Inder, in the Djaman-Inder mountains, and at several places of the country between the Volga and the Ural.

This series of gyps is certainly older than the chalk sediments, and is considered as the oldest geological formation met with between the Volga, the Ural River, and the Ust-Urt.

2.—Boring 5, 115 sagenes west of 1, has not led to the discovery of petroleum deposits, but shows a geological

* A paper presented at the Petroleum Congress, Paris Exposition, from Petroleum Review.

formation entirely different, having nothing in common with the others, except the Caspian sediments of the surface. Being of a depth of 43 sagenes, this boring runs through more than 15 sagenes of upper chalk and calcareous marl, with some remains of belemitella, and through 21 sagenes of calcareous and marl clay.

(To be continued.)

Directory of the Paint Clubs in the United States.

Following is a list of officers and directors of paint, oil and varnish clubs of the United States:

NATIONAL PAINT, OIL AND VARNISH ASSOCIATION.

President—G. M. Vial, Chicago.
Vice-Presidents—F. G. Elliott, Philadelphia; A. M. Hughes, Kansas City.
Secretary—G. Van Ness Person, Chicago.
Treasurer—A. Sherwood, Cleveland.
Auditor—Charles T. Pierce, New York.
Directors—New England, F. H. Newton, Boston; St. Louis, A. A. Eberson; New York, S. V. V. Huntington; Chicago, George E. Van Woert; Detroit, Boutell; Cincinnati, W. H. Miller; Philadelphia, H. E. Yarnall; Pittsburgh, Chas. G. Wettach; Kansas City, H. D. Cutler; Cleveland, W. D. Foss; Minnesota, W. S. Flynt, of St. Paul; Indianapolis, L. H. Sargent; Buffalo, McLennan; Louisville, A. O. Goshorn; Richmond, R. C. Worthington; Toledo, Henry A. Lacy.

PAINT GRINDERS' ASSOCIATION OF THE UNITED STATES.
(Organized May 8, 1899.)

President—W. L. Davies, Detroit.
Vice-Presidents—F. G. Elliott, Philadelphia; Ludington Patton, Milwaukee.
Treasurer—A. G. Cox, Chicago.
Secretary—D. Van Ness Person, Chicago.
Directors—N. Gregg, St. Louis; W. W. Lawrence, Pittsburgh; A. Burdsal, Indianapolis; M. I. Waugh, Lincoln, Neb.

PAINT AND OIL CLUB OF NEW ENGLAND.
(Organized Feb. 23, 1884.)

President—Norris S. Wilson, Boston.
Vice-President—J. William Rice, Providence.
Secretary—C. W. Willis, Boston.
Treasurer—William S. Cutler, Boston.
Directors—F. H. Newton, Boston; S. G. King, Boston; R. D. Archer, Boston; Geo. B. Dexter, Boston; Leander Fobes, Portland; M. W. Brownell, New Bedford; J. Russell Marble, Worcester.

PAINT, OIL AND VARNISH CLUB OF COLORADO.
(Organized Nov. 3, 1900.)

President—J. G. McMurtry, Denver.
Vice-President—L. T. Minehart, Denver.
Treasurer—B. L. James, Denver.
Secretary—W. B. Sale, Denver.
Executive Committee—Louis, Florman, Pueblo; H. N. Jones, Denver; W. F. Meyer, Denver, and the officers.

PAINT AND OIL CLUB OF PORTLAND.
(Organized Nov. 28, 1884.)

President—William L. Blake.
Vice-President—George L. Fogg.
Secretary and Treasurer—Edward S. Everett.
Executive Committee—Frank M. Brown, Edward A. Hay, H. B. Pennell.

PAINT, OIL AND VARNISH CLUB OF NEW YORK.
(Organized Feb. 26, 1887.)

President—W. H. Andrews.
Vice-President—S. V. V. Huntington.
Secretary and Treasurer—W. B. Templeton.
Executive Committee—John Dohse, Carl Mers, E. R. Drake, Malcolm Graham, Jr., J. M. Peters, L. C. Gillespie, Jr.

THE PAINT AND DRUG CLUB OF PITTSBURGH.
(Organized May 24, 1887.)

President—Chas. F. Nevin.
Vice-President—Geo. A. Kelly, Jr.
Secretary—Geo. F. Smith.
Treasurer—C. F. Wells, Jr.
Executive Committee—Composed of the officers.

PAINT, OIL AND VARNISH CLUB OF CHICAGO.
(Organized May 31, 1887.)

President—Chas. E. Field.
Vice-President—George M. Vial.
Secretary—D. Van Ness Person.
Treasurer—W. H. Leonard.
Executive Committee—F. W. Rockwell, M. L. Barrett, George A. Martin.

ST. LOUIS PAINT, OIL AND DRUG CLUB.
(Incorporated June 1, 1887.)

President—W. H. Gregg, Jr.
Vice-President—Geo. B. Merrell.
Secretary—James A. Venable.
Treasurer—Fred Westerbeck.
Directors—W. H. Baker, C. W. Blow, D. P. Daugherty, A. A. Eberson, M. H. Stearns.

THE PAINT CLUB OF PHILADELPHIA.
(Organized Oct. 21, 1887.)

President—William Waterall.
Vice-President—W. H. Wetherill.
Secretary—George B. Heckel.
Treasurer—S. K. Felton.
Executive Committee—Howard B. French, Charles H. Howell, Edward F. Beale, F. G. Elliott.

DETROIT PAINT, OIL AND VARNISH CLUB
(Organized Nov. 12, 1889.)

President—William S. Davies.
Vice-President—A. A. Boutell.
Secretary—John Schroder.
Treasurer—J. Frank Boydell.
Executive Committee—S. E. Pitman, W. P. Fuller, Wm. Stridiron.

THE CINCINNATI PAINT CLUB.
(Organized Dec. 21, 1889.)

President—Jos. F. Piepmeyer.
Vice-President—C. Edgar Wilson.
Secretary—Robt. McF. Smith.
Treasurer—A. S. Boyle.
Board of Control—J. Gordon Taylor, I. A. Burgett, Jno. H. Wolf and the officers.

PAINT, OIL AND GLASS CLUB OF NEBRASKA.
(Organized March 7, 1890.)

President—Frank B. Kennard.
Vice-President—F. E. Ritchie.
Secretary—M. J. Waugh.
Treasurer—S. B. Hayden.
Executive Committee—C. F. Weller, Wm. Cummings, C. J. Daubach and officers.

KANSAS CITY PAINT, OIL AND VARNISH CLUB.
(Organized March 13, 1890.)

President—W. N. Marsh.
Vice-President—Port Havens.
Treasurer—E. A. Campbell.
Secretary—H. W. Diamond.
Directors—L. L. Roby, A. C. Hunt, George Evans and officers.

BROOKLYN PAINT DEALERS' ASSOCIATION.
(Organized March 26, 1890.)

President—A. M. Montignani.
Secretary—Samuel M. Wood.
Treasurer—S. B. Kraus.
Executive Committee—Composed of the officers.

MILWAUKEE PAINT, OIL AND DRUG CLUB.
(Organized Nov. 6, 1890.)

President—Charles Baumbach.
Vice-President—J. E. Patton, Jr.
Secretary—George F. O'Neill.
Treasurer—Charles A. Meissner.
Executive Committee—C. H. O'Neill, David Hecht, J. E. Patton, Jr.

CLEVELAND PAINT, OIL AND VARNISH CLUB.
(Organized Sept. 3, 1891.)

President—C. J. Wilmot.
Vice-President—A. L. Stark.
Secretary and Treasurer—E. F. Van Zandt.
Board of Directors—A. Sherwood, A. B. Fish, F. H. Palmer, P. N. Smit.

SAN FRANCISCO PAINT, OIL AND VARNISH CLUB.
(Organized March 29, 1893.)

President—J. P. Jourdan.
Vice-President—J. O. Law.
Secretary—Saul Magner.
Treasurer—G. Ammerup.
Board of Directors—Charles M. Yates, R. R. Nason, S. H. Brown.

TWIN CITY PAINT, OIL AND DRUG CLUB.
(Organized Sept. 28, 1896.)

President—W. A. Ramsey, Minneapolis.
Vice-President—Joseph Bartles, St. Paul.
Secretary—C. B. Lyon, St. Paul.
Treasurer—J. B. Moffett, Minneapolis.
Directors—C. P. Noyes, W. S. Flynt, F. W. Foreman.

BUFFALO PAINT, OIL AND VARNISH CLUB.
(Organized Sept. —, 1890.)

President—J. W. Daniels.
Vice-President—W. H. Kestin.
Secretary—Chas. W. Wright.
Treasurer—Chas. A. Fritzsche.
Executive Committee—

LOUISVILLE PAINT, OIL AND VARNISH CLUB.
(Organized Feb. 8, 1900.)

President—A. O. Goshorn.
Vice-President—J. S. Harrison.
Secretary—Stewart McDowell.
Treasurer—Lewis Atwood
Board of Control—T. Trammel, Charles Blatz, Stewart McDowell.

PAINT AND OIL CLUB OF RICHMOND.
(Organized May 12, 1900.)

President—John B. Purcell.
Vice-President—H. S. Binswanger.
Secretary—R. C. Worthington.
Treasurer—John F. Tanner

As soon as received we shall make corrections and include other clubs, and, as it is desired to keep a correct directory of the above, we ask the various clubs to notify us at once of any changes made.

Liquid Fuel in Steamers.

The steamship Cowrie of the Shell Transport and Trading Company, managed by Sir Marcus Samuel & Co., which is now discharging a cargo of oil in the Thames, has steamed all the way from Koetei, in Borneo, to London—9,250 miles—using nothing but liquid fuel; and the boilers for supplying the steam for the pumps now discharging the cargo are fired by the same material. The oil is not burned by a thin layer of incandescent coal, as is the case in some systems, but is pulverized or reduced to spray by means of a steam jet at the furnace door, where it is delivered from furnace tanks above the boilers. The Cowrie was formerly fired with coal, and her conversion to liquid fuel has been attended with advantageous results. Her complement of stokers has been reduced to six, as against sixteen necessary with coal, and her speed has at the same time been slightly improved. Moreover, the chance has effected an important saving in bunker space, for her consumption of oil on this voyage was only 22 tons a day, whereas her daily consumption of coal used to be 35 tons, and a ton of oil is calculated to occupy only 34 cubic feet, against 45 feet required for coal. Oil, too, can be carried in the water-ballast tanks, and can also be taken on board much more quickly than coal—on a recent occasion 300 tons were pumped into a German steamer in one hour.

The oil yielded by the Borneo fields forms an excellent fuel when used just as it comes from the ground, and is said to be superseding both the Russian and the American products in the Far East, where it is extensively used for fuel in steamers—e. g., the Hamburg-American boats engaged in the eastern trade. To give some idea of its cost, it may be mentioned that, according to the terms of a recent contract, which need not be specified exactly, it is to be delivered at the price of 30s. a ton at Singapore and Hong Kong, 32s. 6d. ($7.90) at Shanghai, 35s. ($8.51) in Japan and Colombo, and 50s. ($12.16) at Suez. The Cowrie brought from Borneo over 6,000 tons of solar oil, the greater part of which is destined to be used by the Gas Light and Coke Company for the production of oil gas for enrichment purposes, and it is an interesting fact that the vessel (or one like her) will be bunkered with the refuse that remains after the oil has been utilizd in this manner.—London Times.

Some time ago a boy named Arthur K. Ridley, who was in the employ of S. G. McCotter, was arrested for stealing mail from the letter box at the entrance of Stallman & Fulton's building. He was discovered in trying to pass checks which were drawn to the order of Stallman & Fulton. On Friday Recorder Goff sentenced the boy to Elmira Reformatory.

American Linseed Company.

D. W. Trotter, assistant treasurer of the American Linseed Co., has given out the following statement in refutation of the reports on the exchanges:—

"It is officially denied that the American Linseed Oil Co. is in any way embarrassed, as has been scurrilously reported by a few irresponsible parties in La Salle Street, or that it is on the wrong side of the flaxseed market, or that any condition exists which will throw it into the hands of a receiver. For the entire preferred capital stock at 50 cents (at which it sold Wednesday) there is more than enough real estate and machinery to compensate a purchaser at that figure, leaving a surplus of over $5,000,000 in quick assets. It can be readily seen that the company is in just as good condition today as it was six months ago.

"All the stories which have been issued have been purely for the purpose of bearing the market for the benefit of a few curbstone brokers who thrive on $5 and $10 a day and count $25 as a handsome profit."

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ELAINE OIL. PARAFFINE CANDLES.
GLYCERINE—CRUDE. DRAWING-ROOM CANDLES.
REFINED BEESWAX. BEESWAX.
BLEACHED BEESWAX. WAX TAPERS.
LAUNDRY WAX. WAX CRAYONS.
THREAD WAX. CANDLE SHADES.
FLOOR WAX. CANDLESTICKS.
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☞Our Quotations are those of Importers and Manufacturers, for original packages and large lots. For broken lots higher prices are asked.

Oils, Etc.

Vegetable Oils.

Linseed, city, raw, in bbls, per gal.	.75	@76
Boiled, in bbls.	.76	@77
out of town, on spot	.71	@73
Calcutta, raw, in bbls	.85	@86
Varnish oil, American	—	@—
Calcutta	—	@—
Cottonseed, crude, prime	.28	@29
" " f. o. b. mills	.25	@26
Crude, off quality	—	@—
Yellow summer, prime	.33½	@34
Yellow summer, butter	.36½	@37
Yellow summer, off q'l'ty	.31½	@32
White summer	.34	@37
Yellow winter	.37	@39
White winter	—	@—
Soap stock ℔ lb.	1½	@—
Olive ℔ gal.	.55	@61
Olive soap stock	5½	@ 6
Palm, red	5½	@ 5½
Lagos	5½	@ 6
Castor No. 3	.11	@13
Cocoanut, Ceylon	6	@ 6½
Cochin	6¾	@ 6½
Corn	.7.00	@7.50
Peanut, white	—	@—
yellow	.58	@68
Rosin, first run ℔ gal.	.15	@—
Second run	.17	@—
Third run	.19	@—
Fourth run	.21	@—
Rapeseed, in bbls., No. 1	.71	@72
No. 2	.69	@70

Animal and Fish Oils.

Black fish, crude ℔ gal.	.35	@40
Bleached winter	.48	@49
Cod, domestic, prime	.34	@35
Newfoundland	.36	@37
Degras, French ℔ lb.	4½	@ 5
English	3½	@ 3¾
German	2¾	@ 3
Herring ℔ gal.	—	@—
Lard, prime	.57	@59
Extra No. 1	.47	@49
No. 1	.41	@42
No. 2	.38	@40
Menhaden, prime, crude	.25	@26
Southern prime	.23	@24
Brown strained	.28	@29
Light strained	.29	@30
Bleached winter	.35	@—
Ex bleached winter white	—	@37
Neatsfoot, white	.60	@62
Prime	.48	@50
Extra No. 1	.46	@47
Dark	.43	@45
20° cold test	.78	@80
30° cold test	.66	@67
Red, Elaine	.39	@—
Saponified ℔ lb.	4½	@ 5
Sea elephant, bleached winter ℔ gal.	—	@—
Natural water	—	@—
Seal, bleached, refined	.42	@—
Sod, American	.28	@30
English	.36	@37
Sperm, crude	—	@—
Natural spring	—	@—
Natural winter	.56	@—
Bleached spring	—	@—
Bleached winter	.61	@—
Tallow, prime	.50	@51
Dark	.43	@45
Whale, crude	—	@—
Natural winter	—	@47
Natural spring	—	@—
Bleached spring	—	@—
Bleached winter	—	@49
Extra bleached winter	—	@51

Mineral Oils.

Black reduced, 20 gravity, 20@30 c. t.	9½	@10½
29 gravity, 15 cold test	10¾	@11¼
29 gravity, zero	11¾	@12¾
Summer	9¼	@ 9¾
Cylinder, light filtered	14¾	@17¾
Dark filtered	11¾	@16¼
Extra cold test	21¾	@26¾
Dark steam refined	8¾	@10¾
Natural, Franklin, 32 gravity	10¾	@15¾
Smith's Ferry, 33@34 gravity	8¼	@ 9¼
West Virginia, 29 gravity	22¾	@24¾
Neutral filtered lemon, 33@34 gravity	13¾	@19¼
White, 33@34 gravity	21¾	@23¾
32@34 gray, bloomless	13¾	@19¼
32 gray, wool grade	11¾	@14¾
Paraffine, high viscosity	22¼	@28¼
903-907 sp. gr.	14¾	@15¼
903 sp. gr.	13¾	@14¼
883 sp. gr.	12¼	@12¾
875 sp. gr.	12	@12½
865 sp. gr.	12	@12½
Red paraffine, No. 1	14¾	@15¼
No. 2	13¾	@14¼
Spindle No. 1, filtered	16¼	@17¼
No. 1	13¼	@14¼
No. 2	12¼	@13¼
No. 3	11¼	@12¼
No. 4	10¾	@11¼

Oil Cake, Meal, Etc.

Calcutta cake, city ℔ ton.	30.50	@—
City domestic	28.50	@29.00
Western, in bags	28.50	@29.00
Cottonseed cake at Memphis	19.25	@ —
at Galveston	21.25	@21.50
at Boston	26.00	@—
Cottonseed meal at Memphis	19.25	@ —
at Galveston	21.25	@21.50
Corn cake	21.00	@ —
meal	21.00	@ —

Wax, Lard, Tallow, Etc.

Paraffine wax, crude ℔ lb.	6¼	@ 6¾
refined, 120 m. p.	—	@ 8¼
125 m. p.	—	@ 8½
130 m. p.	—	@ 9
135 m. p.	—	@ 9¼
140 m. p.	14	@14½
Candles, adamantine, cs, 16 oz. ℔ lb.	10½	@11
14 oz.	11	@11½
paraffine, 4s. and 6s.	9½	@10½
12s. 16 oz.	10½	@11½
14 oz.	11	@12
12 oz.	—	@—
patent sperm, 4s. and 6s.	.38	@40
sperm, 4s. and 6s.	.33	@34
Stearic acid—		
plain 4s., 6s. and 8s.	11½	@12
patent ends, 4s. and 6s.	12½	@13
cartons, 6 lbs. each	13½	@14
Lard, spot, tierces	7.35	@ 7.40
export, pkgs.	—	@ —
compound	6	@ 6½
neutral	7½	@ —
Oleo stearine	6¾	@ —
Lard "	8¼	@ —
Tallow	4¾	@ 5
Stearic acid.	10	@ 10¼

Naval Stores.

Spirits turpentine, spot ℔ gal.	43½	@ 44
Rosin, strained	1.50	@ —
Good strained	1.55	@ —
E.	—	@1.80
F.	—	@1.90
G.	—	@1.95
H.	—	@1.95
I.	—	@2.00
K.	—	@2.10
M.	—	@2.35
N.	—	@2.65
Window glass.	—	@3.10
W. W.	—	@3.50
Tar, regular	—	@2.50
oil barrels.	4.75	@ —
Pitch	1.60	@1.75

Paints, Varnishes, Etc.

White Lead, Zincs, Etc.

White lead, American dry ℔ lb.	5¾	@ 6
In oil	6½	@ 7
English in oil	7¾	@ 9¾
Litharge, American powdered	6½	@ 6¾
English flake	8½	@ 8½
Glassmakers'	8	@ 8¼
Red lead, foreign	7½	@ 7¾
American	6½	@ 6¾
Orange mineral, American	7¾	@ 8¼
English	8½	@10½
French	11½	@11¾
German	8¾	@ 8¾
China white	10	@10¼
Flake white	9	@11
Cremnitz white	15	@18½
Zinc white, Paris G. S., 50 bbls.	9¼ less	4 ℔ ct
G. S., 25 bbls.	9¼	2 ℔ ct
G. S., 10 bbls.	9¼	1 ℔ ct
R. S., 50 bbls.	8¾	4 ℔ ct
R. S., 25 bbls.	8¾	2 ℔ ct
R. S., 10 bbls.	8¾	1 ℔ ct
Antwerp R. S., 50 bbls.	7¾	4 ℔ ct
R. S., 25 bbls.	7¾	2 ℔ ct
R. S., 10 bbls.	7¾	1 ℔ ct
G. S., 50 bbls.	8¾	4 ℔ ct
G. S., 25 bbls.	8¾	2 ℔ ct
G. S., 10 bbls.	8¾	1 ℔ ct
G. S. in poppy oil	12	@12½
R. S. in poppy oil	10¾	@11¼
American, extra dry	4¼	@ 4¾
Florence, Green Seal	7¾	@ 8¼
Florence, Red Seal	7¼	@ 7¾
German	6½	@ 6¾

Dry Colors.

REDS.

Carmine, No. 40 ℔ lb.	2.15	@2.75
Crocus martus, imported	2½	@ 3½
standard American	1	@ 2½
Indian red, standard American	3	@ 3¼
English	4½	@ 5½
Rose pink, American	7	@ 10½
English	7½	@ 9½
Tuscan red, English	7	@ 10
Turkey red, English	4	@ 6
Venetian red, English, prime, ℔ 100 lbs.	180	@2.10
2d quality	1.20	@1.30
American	80	@1 10
Vermillion, imported English, ℔ lb.	80	@ 95
American quicksilver, bulk	—	@ 73
bags	—	@ 73
Chinese	88	@ 95
American	10	@ 25

BLACKS.

Carbon ℔ lb.	8	@20
Drop, American	3½	@ 4
English	7	@11
Ivory	15	@21
Lamp, commercial	3	@ 5
refined	7	@ 9
calcined	10	@20
fine spirit	20	@35

BLUES.

Celestial ℔ lb.	5½	@ 8
Chinese	35	@40
Prussian	30	@38
Prussian, foreign	33	@36
Refiners'	60	@70
Soluble	35	@40
Ultramarine	3	@35
Verditer	25	@30

BROWNS.

Sienna, Italian, burnt and powdered	3½	@ 9½
burnt lump ℔ lb.	1½	@ 3
raw, powdered	3½	@ 7½
raw, lump	1½	@ 3
American burnt and powd'd	1½	@ 2
raw	1½	@ 2
Spanish brown	½	@ 1
Umber, Turkey, burnt and powdered	2½	@ 8½
burnt lumps	3½	@ 4
raw and powdered	2½	@ 3½
raw, lumps	2½	@ 3
American burnt	1½	@ 2
raw	1½	@ 2
Vandyke brown, German	2½	@ 3½
American	1½	@ 2½

GREENS.

Chrome, chemically pure ℔ lb.	13	@20
extra	13	@15
super	10	@13
Chrome, common lb	8	@ 9
Paris, pure	13½	@14½
in pulp	14	@—
Verditer, French	30	@35

YELLOWS.

Chrome ℔ lb.	10½	@ 25
Ocher, Rochelle	1½	@ 3
washed Dutch	4½	@ 5
French	1½	@ 2½
golden	3½	@ 4
domestic ℔ ton.	$10.00	@15.00

Miscellaneous.

Barytes, prime white ℔ ton.	17.00	@20.00
foreign floated	19.00	@21.00
domestic floated	19.00	@20.00
off color	14.50	@17.00
crude, No. 1	9 00	@10 00
No. 2	8.00	@ 8.25
No. 3	7.75	@ 8.00
Blanc fixe ℔ lb.	2½	@ 3¾
Bronze powder	55	@ 2.50
Brocades	55	@ 1.50
Chalk, per ton	2 50	@ 2 75
Clay, China, imported ℔ ton.	12 00	@17 50
domestic	8.50	@10.00
Cobalt oxide ℔ lb.	2 25	@ 2 50
Feldspar ℔ ton.	13.50	@16.00
Fuller's Earth, lump ℔ 100 lbs.	75	@ 80
powdered	75	@ 90
Marble flour ℔ ton.	7.00	@ 8.00
Manganese, car lots ℔ ton.	15.00	@17.00
jobbing ℔ lb.	3	@ 5
Magnesite, raw ℔ ton.	7.00	@ 8.00
calcined, pow'd. ℔ lb.	—	@ 1¾
Plaster ℔ bbl.	—	@ 1.40
dentists'	1.75	@ 2.00
Pumice stone, orig'l cks ℔ lb.	1¾	@ 2
selected lumps in bbls.	4½	@ 6
po'd pure, bbls. ℔ 100 lbs	1¾	@ 1¾
Putty, in blk	1.90	@ —
12½ to 25-lb. tins	2.50	@ —
1 to 5-lb. tins	3.00	@ —
bladders	2.40	@ —
Rottenstone, casks ℔ lb.	6	@ 7½
selected lumps	6	@ 30
powdered, in bbls.	3	@ 8¼
Silex ℔ ton.	12.00	@18.00
Smalt, German blue ℔ lb.	14	@ 15
super black	—	@ —
Talc, American ℔ 100 lbs.	90	@ 1.10
French	1¾	@ 3
Italian	1¾	@ 3
Terra alba, American No. 1	65	@ 70
No. 2	45	@ 50
English	95	@ 1 00
French	95	@ 1 00
Whiting, commercial	43	@ 53
gilders'	54	@ 64
extra gilders'	58	@ 68
American, Paris	66	@ 75
English cliffstone	75	@ 1.20

Glues.

Extra white ℔ lb.	18	@23
Medium white	14½	@16½
Cabinet	13½	@16½
Low grade	13	@15½
Foot stock, white	10	@12½
Brown	11	@13
Common bone	8½	@ 9
Irish	13½	@16
French	13	@40
German hides	13½	@16
common	10	@13½

Varnish Gums.

Asphaltum, Cuban, prime per lb.	4½	@—
Egyptian	5¾	@ 6½
Copal, Sierra Leone, cleaned	.60	@75
Zanzibar, bold white	.60	@70
medium white	.50	@60
sorts	.46	@50
bean and pea	.32	@33
Manila, pale	.14	@16
bright amber	.10	@14
standard sorts	8½	@ 9
nubs, No. 1	6½	@ 7
No. 2	5½	@ 6
chips, No. 1	5	@ 6
No. 2	4½	@ 5
Damar, Batavia	12¼	@13
Singapore	8½	@ 9
Kauri, standard	.26	@30
No. 2	17½	@19
No. 3	.12	@13
Chips	.15	@23
Dust	6	@ 8
B. 1	.17	@19
B. 2	.10	@12
Brown chips	6	@12
Brown dust	4	@ 5
Double cross	.32	@35
Triple cross	.40	@42
Picture quality	.65	@75
Pale and fine selected	.50	@55
Sandarac	—	@18

Window Glass.

AMERICAN WINDOW GLASS.

10 Per Cent. Extra on First Quality.

SINGLE.

	AA	A	B	C
25 inch	24.75	22.75	22.00	21.25
34 "	26.25	24.50	23.00	21.75
40 "	28.75	26.50	24.50	23.50
50 "	29.75	27.50	25.50	..
54 "	32.25	29.50	26.50	..
60 "	37.00	32.00	29.00	..
70 "	39.75	36.00	32.00	..
80 "	47.50	43.00	38.00	..
84 "	49.00	44.75	40.00	..

DOUBLE.

	AA	A	B
25 inch	31.75	30.50	29.00
34 "	39.25	36.25	35.00
40 "	44.00	41.00	37.50
50 "	47.50	44.00	40.00
54 "	50.25	46.50	42.00
60 "	51.25	48.00	44.50
70 "	53.00	51.00	46.50
80 "	56.50	54.00	49.00
84 "	61.00	55.50	50.00
90 "	63.75	57.75	52.00
94 "	67.50	61.50	55.75
100 "	71.25	64.75	58.75

Above 100 inches, $12.00 per box extra for every five inches.

Discounts:—65 & 25 per cent. on all single; 65, 25 & 5 per cent. on all double.

Metallic Paints.

Brown ℔ ton.	19 00	@21 00
Red	16 50	@20 00

Colors in Oil.

Black coach Japan ℔ lb.	20	@35
In oil	15	@20
drop	13	@20
lampblack	12	@14
Blue, Chinese	36	@40
Prussian	32	@36
ultramarine	13	@16
Brown, sienna, burnt	10	@13
raw	10	@13
Umber, burnt	9½	@12
raw	9½	@12
Vandyke, brown	9½	@13
Green, chrome	10	@12
Paris	—	@24
Red, Indian	11	@14
Venetian	6	@ 8
Yellow, chrome	14	@18
ocher, French	5	@ 8

Drugs.

Opium.

Opium, natural (cases) ℔ lb.	$3.40	@ 3.45
as wanted	3.40	@ 3.50
powdered	4.30	@ 4.50

Morphine.

Morphine, bulk ℔ oz.	2.00	@ 2.10
oz. vials	2.05	@ 2.15
¼ oz. vials, 2½ oz. bxs	2.25	@ 2.35
½ oz. vials, 1 oz. bxs	2.30	@ 2.40

Codeine.

Codeine, pure, bulk, 10 oz. ℔ oz.	4.25	@ 4.40
ozs.	4.30	@ 4.45
eighths	4.50	@ 4.65

salts, 45c. per oz. less than pure.

Quinine.

Quinine, 100 oz. tins ℔ oz.	—	@ 35
50 oz. tins	—	@ 35½
25 oz. tins	—	@ 36
5 oz. tins	—	@ 37
1 oz. tins	—	@ 40
1 oz. vials	—	@ 42
Cinchonidia, bulk	28	@ 30

Miscellaneous.

Acetanilid, in bbls ℔ lb.	23	@ 24
Acid, benzoic, true ℔ oz.	12	@ 13½
ex toluol ℔ lb.	45	@ 47
boracic, crystals, city	10½	@ 11
powdered, city	11	@ 11½
carbolic, drums	25	@ 26½
bottles	32	@ 33
tins	29	@ 30
citric, domestic, barrels	39	@ 40½
kegs	39½	@ 41
imported	—	@ —
pyrogallic	2.40	@ 2.55
salicylic	40	@ 45
Alcohol, 94 per cent ℔ gal.	2.45	@ 2.47
ref. wood, 95 per ct.	—	@ 75
97 per ct.	—	@ 80
purified	1.20	@ 1.50
Almond oil, sweet almonds ℔ lb.	30	@ 50
peach kernels	18	@ 21
Aloin	40	@ 45
Ambergris, black ℔ oz.	15.00	@17.50
gray	25.00	@26.50
Ammonia, carb., domestic ℔ lb.	6½	@ 8¾
foreign	8½	@ 8¾
Antimony, needle	8	@ 8½
Areca nuts	8½	@ 10
Arrowroot, Bermuda, genuine	40	@ 45
so-called	15	@ 22
St. Vincent, bbls	9¾	@ 10
cans	11	@ 11½
Balm of Gilead buds	—	@ 30
Barium chloride	2½	@ 2½
chlorate	—	@ 28
nitrate	6½	@ 7½
Barbadoes tar, in bbls ℔ gal.	—	@ 40
Bay rum, bbls	2.00	@ 2.30
Beeswax, white, pure ℔ lb.	45	@ 50
yellow	28	@ 32
Bismuth, citrate	2.20	@ 2.25
subcarbonate	1.95	@ 2.00
subgallate	1.80	@ 1.85
subnitrate	1.75	@ 1.80
Blue pill	41	@ 42
Borax, in bbls	7½	@ —
in bags	7¼	@ —
powdered	7½	@ —
Bromine, bulk	45	@ 50
Burgundy pitch	2½	@ 3
Caffeine	4.50	@ 4.75
Calomel, American	86	@ 88
English	—	@ 1.10
Cantharides, Chinese	57	@ 60
powdered	—	@ 60
Russian	60	@ 65
powdered	—	@ 60
Carnauba wax, No. 1	19	@ 21
No. 2	16	@ 17
No. 3	14	@ 15
Castor oil, city, bbls	12½	@ 13½
cases	13	@ 14
Castile soap, white, pure	9¾	@ 10½
Marseilles	6½	@ 7
green, pure	7½	@ 8
ordinary	5	@ 6½
mottled, pure	6¼	@ 7½
ordinary	4½	@ 5
Ceresin, yellow	12	@ 14
white	14	@ 16
Chalk, precip	4	@ 6
Chlo. hydrate, crusts, 25 lb. jars.	1.20	@ 1.25
crystals, 25 lb. jars.	1.25	@ 1.30
Chloroform	45	@ 55
Civet	1.95	@ 2.00
Clover tops, red	7	@ 8
Cocaine, muri, bulk ℔ oz.	6.50	@ 6.70
oz. vials	6.65	@ 6.80
Cocoa butter, 12-lb. bxs ℔ lb.	47	@ 50
bulk	41	@ 46

Codliver oil, Newf'land...℔ gal.	55	@	65
Norwegian ..℔ bbl.	24.50	@	26.00
Colocynth apples, Spanish..℔ lb.	16	@	18
Trieste.....	40	@	43
Cologne, spirit, 190° ℔ proof gal.	1.31	@	1.33
Corrosive sublimate .....℔ lb.	77	@	79
Coumarin, refined	5.75	@	7.50
Creosote, beechwood.....	95	@	1 00
Cuttlefish, Trieste	26	@	27
Dragon's blood, mass.....	12	@	25
reeds	60	@	70
Epsom salts, per 100 lbs.....	90	@	1.10
Ergot, Russian	55	@	56
Spanish	60	@	70
Ether, 1880	—	@	62
washed	—	@	66
1890	—	@	68
Eucalyptol	—	@	1.50
Formaldehyde	16	@	17
Fusel oil .....℔ gal.	60	@	75
Gelatine Silver .....℔ lb.	27	@	28
Gold	33	@	45
Glucose, 41 deg., per 100 lbs.....	1.45	@	1.50
Glycerine, C. P., drums...℔ lb.	15	@	15½
C. P., bbls.....	15½	@	16
C. P., cans	16	@	18
Dynamite	14	@	14½
Grape sugar, 70 deg., per 100 lbs.	—	@	1.50
Guarana .....℔ lb.	52	@	60
Haarlem oil, old style	2.18	@	2.30
new style.....	2.60	@	3.10
Hypophosphite, lime..℔ 100 lbs.	94	@	1.00
potash	94	@	1.00
soda	94	@	1.00
Iceland moss .....℔ lb.	5	@	6
Insect powder	15	@	25
Iodine, re-sublimed	3 15	@	3 20
Iodoform	3 25	@	3 30
Irish moss, ordinary	5	@	8
bleached	10	@	11
Isinglass, Russian	4.15	@	4.25
American	45	@	50
Japanese	—	@	60
Japan wax	6¾	@	7
Kola nuts, African.....	6½	@	7½
Licorice, mass, Greek.....	8	@	12
Spanish	17	@	24
stick, domestic	16½	@	23½
foreign	23	@	26
Lithia, carb.	3.30	@	—
Lupulin	18	@	25
Lycopodium	57	@	60
Manna, large flake	1.20	@	1.25
small flake	58	@	70
sorts	33	@	35
Menthol	3.20	@	3.50
Myrbane oil	7¼	@	10
Musk, pods, Cab.....℔ oz.	5.00	@	6.00
Nepaul	—	@	—
Tonquin	8.50	@	16.00
grain, Cab.	9.00	@	10.00
Canton, extra	—	@	1.00
Canton, good	18	@	20
Nepaul	—	@	17.00
Tonquin	16.50	@	22.00
Druggists'	15.50	@	16.00
Mustard oil .....℔ gal.	37	@	38
Naphthaline, balls .....℔ lb.	3	@	3¼
crystals	2.85	@	3¼
flakes.....	2.85	@	3¼
Nux vomica	2¼	@	2½
Phosphorus	1.05	@	1.10
Pilocarpine .. ..℔ oz.	12.00	@	—
Poppy heads .....℔ lb.	15	@	18
Precipitate, red	96	@	97
white	1.01	@	1.03
Potash permanganate	12	@	12½
Potassium, bromide, bulk	46	@	47
cyanide, bulk	28	@	29
iodide, bulk	2.30	@	2.35
Quicksilver	67½	@	68
Resorcin	1.65	@	2.00
Rochelle salts	17	@	17½
Salicine, bulk	3.75	@	3.85
Salol, bulk	2.50	@	2.60
1 lb. bots.....	2.60	@	3.00
½ lb. bots.....	2.65	@	3.00
¼ lb. bots.....	2.75	@	3.15
ounces .....℔ oz.	22	@	27
Santonine, crystals, 200 lbs.℔ lb.	3.80	@	3.85
100 lbs.....	3.90	@	3.95
50 lbs.....	3.95	@	4.00
25 lbs.....	4.00	@	4.05
Less.....	4.05	@	4.10
powdered, 10c. per lb. advance.			
Seidlitz mixture	14	@	14½
Sesame oil, per gal.....	65	@	70
Soda, benzoate	44	@	46
salicylate	42	@	46
Spermaceti, blocks, per lb.....	30	@	31
cakes	31	@	32
Strontia, nitrate	6¾	@	7
St. John's bread	2¼	@	3
Sugar of milk, cob.....	15	@	16
powdered	10	@	13
Sulphur, roll	1.75	@	2.05
flour	1.85	@	2.55
Strychnine, bulk .....℔ oz.	65	@	80
Tamarinds .....℔ keg	2.05	@	2.25
Thymol .....℔ lb.	5.00	@	5.10
Vanillin .....℔ oz.	1.00	@	1.25
Venice turpentine .....℔ lb.	14	@	19
Zinc, chloride, gran.....	5	@	5½
sulphate	2¼	@	2¾

Balsams.

Copaiba, Central American..℔ lb.	34	@	36
Para	40	@	42
solidifiable	43	@	45
Fir, Canada .....℔ gal.	2.50	@	2.70
Oregon	80	@	90
Gurjun .....℔ lb.	12½	@	15
Peru	1.30	@	1.40
Tolu	26	@	28

Barks.

Angostura ... .℔ lb.	10	@	11
Bayberry	3¼	@	3½
Black haw, of root, true.....	9	@	12
of tree	9	@	10
Buckthorn	4½	@	5
Cascara sagrada	4¾	@	6
Cascarilla	11	@	12
Canella	14	@	15
Cherry	2¾	@	6
Cinchona—red, quills	20	@	25
broken	15	@	18
yellow, quills	22	@	25
broken	15	@	18
Condorango	28	@	30
Coto	12	@	15
Cramp	5	@	6
Logwood, Jamaica	5½	@	6½
Elm, common	8	@	9
select	10½	@	11
Mezeron	8	@	10
Oak, red	3	@	4
white	3	@	—
Orange peel, bitter, Curacao, ¼s.	3	@	3½
sweet, Malaga, pieces.	7	@	8
quarters.	9½	@	10
sweet, Trieste	—	@	5¼
Prickly ash	8	@	10
Pomegranate, of fruit.....	9	@	11
of root.....	12	@	13
Quebracho	10	@	10½
Sassafras	8	@	12
Simaruba	10	@	12
Soap, whole	3¼	@	3½
crushed	5	@	5¼
Wahoo, of root	16	@	20
of tree	14	@	15
White Pine	—	@	4
White Poplar	3½	@	4
Wild Cherry	2¾	@	6
Witch Hazel	3	@	4

Beans.

Calabar .....℔ lb.	8	@	12
St. Ignatius	14	@	18
Tonca, Angostura	70	@	85
Para	30	@	35
Surinam	50	@	55
Vanilla, Mexican, whole	9.00	@	13.00
cuts	7.75	@	8.25
Bourbon, whole	4.50	@	8.00
Tahiti, whole	1.80	@	1.90

Berries.

Cubeb, whole .....℔ lb.	11	@	14
powdered	15	@	16
Fish (Coculus Indicus)	2¾	@	3
Juniper	2¼	@	2½
Laurel	3	@	4
Prickly ash	—	@	60
Saw Palmetto	12	@	15

Essential Oils.

Almond, bitter .....℔ lb.	3.75	@	6.00
artificial	75	@	1.50
Amber, crude	13	@	15
rectified	22	@	23
Anise	1.45	@	1.55
Bay	2.10	@	2.25
Bergamot	2 00	@	2 40
Birch, sweet	1.75	@	2.00
Birch Tar, crude	14	@	15
extra	20	@	25
Cade	15	@	18
Cajeput	47½	@	55
Camphor	10	@	14
Caraway seed	1.10	@	1.40
Cassia	85	@	90
Cedar leaf	60	@	80
wood	22	@	24
Cinnamon, Ceylon, heavy.....	8.00	@	10.00
Citronella, drums	20	@	22
Cloves	57½	@	65
Copaiba	68	@	75
Coriander	5.00	@	11.00
Croton	90	@	1.00
Cubeb	95	@	1 05
Cummin	3 00	@	3 50
Erigeron	85	@	1.00
Eucalyptus, American	40	@	45
Australian	50	@	60
Fennel seed, sweet.....	60	@	1.25
bitter	45	@	1.00
Geranium rose, African	4.50	@	6.00
Turkish	2.50	@	3.00
French	7.50	@	12.00
Ginger	4.00	@	6.00
Gingergrass	1.10	@	1.50
Hemlock	29	@	35
Juniper berries—rectified	75	@	1 00
twice rectified..	1 20	@	1 50
wood	25	@	35
Lavender, cultivated	1.50	@	1.75
flowers	1.10	@	1.30
aspic, pure	70	@	90
spike	60	@	75
garden	40	@	50
Lemon	1.00	@	1.25
Lemongrass, native	1.30	@	1.40
Limes, expressed	1.90	@	2.25
Linaloe	1 45	@	1 55
Mace, distilled	1.00	@	1.10
expressed	90	@	95
Maleforn	1 50	@	1 75
Mustard, natural	4.50	@	5.50
artificial	2.25	@	2.75
Neroli, petale 27.00		@	32.00
bigarade 23.50		@	26.00
Nutmeg	90	@	1.10
Orange, bitter	2.00	@	2.25
sweet	1.50	@	1.65
Origanum	18	@	22
Patchouly, leaf	—	@	5.00
cultivated	—	@	6.00
Pennyroyal	1.05	@	1.30
Peppermint, tins	1.10	@	1.15
bottles	1.35	@	1.50
Petit grains, French	4.50	@	6.00
South American...	2.50	@	2.80
Pimento	1.75	@	2.75
Rhodium	2.00	@	7.00
Rose .....℔ oz.	3.90	@	4.75
Rosemary flowers, French..℔ lb.	75	@	1.00
Trieste	40	@	50
Sandalwood, East India	3.50	@	3.75
West India	1.70	@	2.00
Australian	—	@	3.25
Sassafras, natural	43	@	48
artificial	37	@	40
Safrol	47½	@	50
Savine	75	@	1 00
Spearmint	90	@	1.00
Spruce	25	@	28
Tansy	90	@	1.15
Thyme, red, French	65	@	90
white, French	75	@	1.00
Wintergreen, nat'l (sweet birch).	1.75	@	2.00
artificial	47½	@	65
leaf	2.25	@	2.90
Wormseed—Baltimore	90	@	1.10
Wormwood, pure.	5.50	@	6.00
Ylang ylang 40.00		@	75.00

Flowers.

Arnica .....℔ lb.	9½	@	10½
Calendula, foreign	52	@	55
Chamomile, Roman	18	@	21
German, true	26	@	30
Hungarian	13	@	20
Insect	15	@	30
Lavender, ordinary	4	@	5
select	7	@	15
Poppy, red	—	@	35
Rosemary	15	@	16
Saffron, American	9	@	10
Alicante	5.00	@	5.50
Valencia	8.75	@	9.50

Gums.

Aloes, Curacoa, in boxes...℔ lb.	3¾	@	4
Cape	6¼	@	7
Secotrine	20	@	24
Ammoniac	20	@	—
Arabics, firsts	45	@	50
seconds	32	@	36
thirds	27	@	28
fourths	22	@	24
siftings	15	@	15½
sorts	14½	@	16
Assafoetida	18	@	24
Benzoin	27½	@	35
Camphor, American, barrels	60½	@	—
cases.....	61	@	—
ounces.....	62½	@	63½
Japan	60½	@	65
Chicle	31	@	34
Euphorbium	—	@	15
Galbanum	70	@	75
Gamboge, pipe	38	@	40
chips	35	@	37½
Guaiac	11	@	15
Kino	45	@	50
Mastic	37	@	44
Myrrh	12	@	28
Olibanum, siftings	4	@	4½
sorts	5½	@	—
tears	8½	@	9
Sandarac	16	@	20
Scammony, resin	—	@	2.25
Aleppo	2.75	@	2.90
Virgin	4.00	@	6.50
Senegal, picked	15	@	24
sorts	13½	@	15
Tragacanth, Aleppo, firsts.....	65	@	70
seconds....	55	@	60
thirds.....	45	@	50
fourths....	30	@	35
Turkey, firsts.....	75	@	85
seconds....	50	@	60
thirds.....	40	@	45

Herbs and Leaves.

Aconite .....℔ lb.	—	@	10
Althea	—	@	10
Belladonna	13	@	15
Bucnu, short	20	@	25
long	28	@	30
Cannabis Indica	30	@	35
Coca, Huanoco	34	@	38
Truxillo	24	@	25
Coltsfoot	7	@	9
Conium	10	@	--
Deer tongue	4¾	@	5½
Damiana	10	@	11
Digitalis	10	@	12
Doggrass	6½	@	7¼
Eucalyptus	3	@	5
Grindelia robusta	6	@	6½
Henbane (hyosciamus)	10	@	12
Horehound	6	@	6½
Jaborandi, long	—	@	15
round	10	@	12
Laurel	3¼	@	3¾
Lobelia	—	@	5½
Matico	10	@	14
Marjoram, German	17	@	18
French	10	@	11½
Pennyroyal	—	@	8½
Peppermint, American.....	—	@	7
German	25	@	45
Pichi, tops	18	@	20
Pulsatilla	25	@	30
Prince's pine	—	@	8
Rose, red	1.00	@	1.10
pale.	10	@	11
Rosemary	—	@	4
Rue	13	@	16
Sage, Italian picked.....	3½	@	4
Savory	3¾	@	4
Scull cap	18	@	20
Squaw vine	7	@	8
Senna, Alex, whole leaf.....	23	@	25
half leaf	14	@	18
siftings	8	@	10
Tinnevelly	7	@	12
Stramonium	10	@	11
Thyme	3¾	@	4
Uva Ursi	4	@	4¼
Witch hazel	3¾	@	—
Wormwood, foreign	5½	@	7
Yerba Santa	5	@	6

Roots.

Aconite, German .....℔ lb.	14	@	16
Alkanet.....	5½	@	6
Althea, whole	13	@	14
cut	16	@	19
Angelica, German	14	@	15
American	7	@	8
Arnica	10	@	14
Belladonna, Atropa	10	@	10½
Scopalia	—	@	—
Berberis Aquifolium	9	@	10
Bitter	—	@	16
Blood	6	@	7
Blueflag	7	@	9
Byronia	11	@	12
Burdock	7	@	8
Calamus, bleached	25	@	30
unbleached	6½	@	7½
Cohosh, black	3½	@	4½
blue	—	@	5
Colchicum	8	@	10
Colombo	7	@	10
Culvers	7½	@	9½
Dandelion, German	8	@	9
Elecampane	4	@	4½
Galangal	6½	@	8
Gelsemium	5½	@	6½
Gentian	3¾	@	4
Ginseng, Southern	3.00	@	4.00
Northern	5.50	@	6.00
Northwestern	5.00	@	5.50
Ginger, Jamaica, unbleached....	9½	@	10½
bleached	12½	@	13½
Golden seal	55	@	58
Hellebore, white	6	@	6½
black	5	@	6
powdered	8	@	8½
Hydrangea	—	@	5
Ipecac, Rio	2.75	@	2.85
Jalap	12½	@	14
Kava Kava	13	@	14
Lady Slipper	—	@	14
Licorice, in bales	2	@	4
selected, bundles	7	@	8
Lovage, American .....℔ lb.	—	@	50
German	9	@	10
Mandrake	3¾	@	5
Musk, Russian	16	@	18
Orris, Florentine, bold.....	12	@	14
small	11	@	12
Verona	5	@	7
Fingers	60	@	65
Pareira brava	7½	@	9
Pellitory	15	@	16
Pink	18	@	20
Pleuresy	9	@	10
Poke	3½	@	4½
Rhatany	12	@	15
Rhubarb, Canton	30	@	40
Shensi	55	@	60
high dried	17½	@	25
clippings	15	@	35
Sarsaparilla, Honduras	28	@	33
Mexican	7¾	@	8
Senega, Southern	—	@	—
Western	45	@	48
Serpentaria	35	@	36
Skunk Cabbage	7½	@	8
Snake, Canada	22	@	25
Virginia	45	@	48
Stillingia	4½	@	5
Stone	4	@	5
Squills	3¾	@	4
Unicorn, false	30	@	35
true	—	@	16
Valerian, German	15	@	16
Belgian	7	@	9
English	18	@	20
Wild Yam	5½	@	6
Yellow Dock	—	@	4½
Zedoary	9	@	10

Seeds.

Anise, Italian, sifted.....℔ lb.	7¾	@	8
Russian	5	@	5¼
star	21	@	22
Canary, Sicily	2½	@	2¾
Smyrna	2¼	@	2¼
Caraway, Dutch	7½	@	8
Cardamoms, bleached	60	@	90
decorticated	65	@	70
Celery	7	@	7½
Colchicum, German	25	@	26
Conium	7¾	@	8
Coriander, natural	3½	@	3¾
bleached	—	@	4
Cummin, Malta	8	@	8½
Fennel, German	10	@	11
Italian	5	@	5½
Flax, per bbl.....7.00		@	7.50
ground, per lb.....	4	@	4½
Fenugreek	2	@	2¼
Guinea grains	10	@	15
Hemp, Russian	2¾	@	2¾
Larkspur	30	@	33
Lobelia	—	@	30
Millet	1¾	@	1¾
Mustard, brown, Bari.....	4½	@	4¾
California	4½	@	4¾
Sicily	4	@	4¼
Trieste	6	@	6½
yellow, California	6	@	6¼
English	5¼	@	5¾
German	4½	@	4¾
Poppy blue	4¾	@	5
Quince, German	40	@	45
Rape, English	3¾	@	4
German	3½	@	3¼
Domestic	3	@	3¼
Sabadilla	10	@	12
Stavesacre	10½	@	11
Stramonium	—	@	9
Strophanthus, green 1.25		@	1.50
brown	30	@	35
Sunflower	2¾	@	2½
Worm, Levant	7	@	8
American	5	@	7

Shellac.

D. C. ....℔ lb.	30	@	31
V. S. O.....	22	@	23
Triangle G.	21	@	22
S. S.	—	@	18
S. D.	20	@	21
T. N.	15	@	16
Garnet, A. C.	15	@	17
Button	20	@	27
Bleached	16	@	18

Spices.

Cassia, Batavia, No. 1.....℔ lb.	21½	@	22½
broken	12	@	13
Canton, matted rolls.....	8¼	@	8½
broken	5	@	5¼
cases	10	@	10½
Saigon, rolls	48	@	49
broken	33	@	35
buds	23½	@	24
Cloves, Amboyna	12½	@	13
Zanzibar	8	@	8¼
stems	3½	@	3¾
Ginger, African	7¾	@	8
Calcutta	7	@	7¼
Cochin, A B C.....	8	@	8¼
D.	7	@	7¼
Jamaica	9½	@	10½
Mace, Banda	39½	@	41
Batavia	31	@	32
Penang	39	@	40
Nutmegs, 110's	25	@	26
Pepper, black, Acheen.....	12¼	@	12½
Singapore	13½	@	13¾
W. C. Sumatra.....	12½	@	12¾
white, Penang	18¼	@	18½
Singapore	21	@	21½
red, capsicums	10½	@	11
Zanzibar	11½	@	11¾
Pimento, Jamaica, prime.....	6	@	6¼

Chemicals.

Heavy Chemicals.

Alkali, 48 per cent., Solvay, ℔ 100 lbs.	85	@	90
ammonia, high test.....	75	@	85
Bleach over 35 per cent.....	1 75	@	1 90
Salt cake	82½	@	85
Soda, ash, carb., 48 per cent....	1 20	@	1 25
high test	85	@	90
caustic, 48 per cent.....	—	@	—
Newcastle, 48 per cent....	—	@	—
high test.....	—	@	—
Soda, bicarb., English.....	1 75	@	2 00
American	1 10	@	3 50

Caustic, domestic, ₩ 100 lbs.			
60 per cent	1 85	@	2 00
70 per cent	1 75	@	1 80
74 per cent	1 75	@	1 85
foreign, 60 per cent	—	@	—
70 per cent	—	@	—
74 per cent	—	@	—
76 per cent	—	@	—
Powdered, Granulated, ₩ 100 lbs.			
60 per cent	2 75	@	3 00
70 per cent	2 85	@	3½
74 per cent	3 00	@	3¼
A. C. P.	3¼@		3½
Sal., English	65	@	67½
American	60	@	70

Acids.

Acid, acetic ₩ 100 lbs.	1.75	@	4 00
chemically pure ₩ lb.	20	@	21
oxalic	5¾@		6
pyroligneous	9	@	12
sulphuric, 60 deg., ₩ 100 lbs	1 05	@	1 30
66 deg.	1 20	@	1 75
bulk, 50 deg.	14 00	@	16 00
muriatic, 18 deg.	1 20	@	1 25
20 deg.	1 35	@	1 85
22 deg.	1 50	@	2 25
aqua fortis, 36 deg. ₩ lb	3¾@		4½
38 deg.	3¾@		4¾
40 deg.	4½@		4¾
42 deg.	4½@		4¾
nitric, 36 deg.	3¾@		4¾
38 deg.	4¼@		4¾
40 deg.	4¾@		4¾
42 deg.	4¾@		5¼
tartaric, crystals	30½@		31
powdered	31	@	31½

Miscellaneous Chemicals.

Acetate of lime, gray ₩ 100 lbs.	1 55	@	1.60
brown	1 05	@	1 10
Alum, lump	1 75	@	1 85
ground	1 85	@	1 95
porous	1 85	@	1 95
Argols, plates ₩ lb.	24	@	—
red	2¼@		2⅜
Arsenic, white	4½@		4¾
red	7	@	7¾
Brimstone, crude, 2ds. ₩ ton.	21 00	@	23 00
3ds	19 00	@	20 00
Cream tartar, crystals, p. c. ₩ lb.	21	@	21½
powdered, 99 p. c.	22	@	22½
Chloride of calcium	90	@	95
Copperas	72½@		—
Glauber salts	70	@	80
Nitrate of lead	6¾@		7¼
soda	1 80	@	1 82½
Chlorate of soda	9¼@		9¾
Sugar of lead, brown	5¾@		6
white	7¾@		8
Saltpeter, crude	3 60	@	3¾
refined	4¼@		5¼
Sulphate, alumina	1¼@		1½
Vitriol, blue	5¼@		5½

Ammoniates, Potashes, Etc.

Ashes, pot, 1st sorts. ₩ lb.	4	@	4½
pearl	5½@		6
Potash, chlorate	8½@		9
powdered	8¾@		10
Carb.	4	@	5¼
caustic	6	@	7½
dbl. m're salt. 48@53%.	1 06	@	1 06¼
dbl. m'ure salt. 48@53%. less than 25 tons.	26 00	@	33 00
sulph. of. basis 90@98%.	2 05½@		2 08½
90@98%, less than 25 tons.	40 00	@	42 00
Kainit, 25% S. of P. ₩ ton.	9 05	@	9 55
less than 25 tons.	10 00	@	14 00
Sylvinit, 35@37% P. ₩ unit.	38½@		41½
Aq. am'ia (in cbys) 16 deg. ₩ lb.	9	@	9¼
18 deg.	3¾@		4
20 deg.	3¾@		4½
26 deg.	5½@		6¼
Ammonias, sal., gray	6	@	—
granulated	6	@	—
lump	9¼@		9¼
Ammonia, sulphate	2 77½@		2 80
Potash, muriate ₩ 100 lbs.	1 83	@	1 86½
less than 25 tons.	38 00	@	42 00
Ammoniates, etc.:			
Blood, dried, red. ₩ unit.	2 35	@	—
low grade	2 25	@	—
Concentrated tankage	15 00	@	15 50
Bones, rough ₩ ton.	21 50	@	—
ground	22 00	@	—
Bone meal	18 00	@	19 00
Bone black, refuse	18 00	@	20 00
Fish, guano, dried	23 00	@	—
acidulated	12 00	@	—
Phosphate rock, f. o. b. Char'n.	—	@	—
f. o. b. Peace River	—	@	—
Lead, pebble, 70%	—	@	—
Acid phosphate	65	@	67½

Dyestuffs.

Acid, gallic ₩ lb.	65	@	70
Acid, picric, best crystals	34	@	37
tannic, commercial	46	@	50
crystals	82½@		85
Acetate of soda	4¼@		4½
Albumen, egg	57	@	65
blood	16½@		19
Alizarine, red	15½@		17
Aniline oil	10	@	10½
salt, crystals	9⅝@		10
Annatto	8	@	12
fine	25	@	—
seed	—	@	5
Antimony, oxymuriate	4	@	6
salt, 65%	16	@	17
47%	13½@		15
tartar emetic	22½@		30
Bichloride tin, 50 deg.	9½@		11
60 deg.	11¾@		13
Bichromate of potash, Scotch	8¾@		9
American	8½@		8¾
Bichromate of soda	6½@		6¾
Bisulphate of soda	1½@		2¼
Carmine of indigo	60	@	75
Cochineal, Teneriffe, silver	18	@	20
black	21	@	24
gray black	24	@	25
Cudbear, French	12	@	18
concentrated	23	@	25
English	10	@	18
Cutch, mat.	5½@		6
refined	6	@	7
refined in boxes	7½@		8
Dextrine, imported	5¾@		6
domestic	5½@		6
corn	2¾@		3
Divi divi	47 00	@	50 00
Flavine ₩ lb.	23	@	42
Fustic stick ₩ ton.	16 00	@	22 00
young root	35 00	@	37 50
Gambier ₩ lb.	4¼@		4½
Cube No. 1	6¼@		6½
No. 2	5¼@		5½
kgs.	6	@	8
Garancine	6	@	8
Hypo. of soda, Am., cks. ₩ cwt.	1 80	@	2
German, cks.	1 90	@	2 12½
kgs.	2	@	2 2½
Indigo, Bengal, low grade. ₩ lb.	2 20	@	2½
medium	72½@		77½
high grade	82½@		90
Kurpahs, medium to good	95	@	1 20
higher grades	70	@	75
Guatemala	65	@	75
Manila	77½@		90
Madras	40	@	60
J (Synthetic)	40	@	50
Indigotine	—	@	38
Logwood stick ₩ ton.	95	@	1 80
roots	18 00	@	23 00
Madder, Dutch ₩ lb.	17 00	@	20 00
French	8	@	10
Myrabolans	6	@	7½
Muriate of tin, 36 deg.	2½@		3
52 deg.	—	@	10
Nitrate of iron, commercial	—	@	16
true	1¼@		1¾
Nutgalls, blue Aleppo	4	@	4½
Chinese	26	@	27
Persian berries	20	@	—
Prussiate of potash, yellow	6	@	8
red	15	@	15½
Prussiate of soda	37	@	40
Phosphate of soda	13	@	14
Quercitron ₩ ton.	2¾@		3½
Sago flour ₩ 100 lbs.	18 00	@	21 00
Salts of tartar ₩ lb.	3½@		3 30
Silicate soda	5½@		7
Soluble oil, 50 per cent	1	@	2
75 per cent	8	@	9
Starch, corn, pearl, in bbls	11	@	12
in bags	1 55	@	2
potato	1 45	@	1½
rice	3¾@		3⅞
wheat	7½@		9
Stannate of soda	4½@		5⅛
Sumac, Sicily, No. 1. ₩ ton.	10	@	15
No. 2	55 00	@	58 00
Virginia	51 00	@	54 00
Tapioca flour ₩ lb.	40 00	@	45 00
Tin crystals	3¾@		4
Turmeric, Bengal	24½@		26
Aleppy	7	@	7¾
Chinese	7¼@		8
Coringa	7	@	7½
Vanadiate ammonium ₩ oz.	7¼@		7¾
Zino dust, per lb.	—	@	60

Chipped Dyewoods, Etc.

Barwood ₩ lb.	7⅝@		8
Camwood	2	@	2¼
Fustic	6	&	8
Hypernic	1½@		2
Logwood, Campeche	3	@	3¼
Red sanders	1¾@		1¾
	2¾@		3

Extracts.

Archil, double ₩ lb.	8	@	13
concentrated	9	@	15
Barberry, French	22	@	28
Chestnut	2¾@		3¼
Oak	3½@		4
Hemlock	2½@		2¾
Fustic, solid	8	@	10
liquid, 51 deg.	6½@		9
Gall	15	@	18
Indigo	7	@	20
Logwood, solid	8	@	12
liquid, 51 deg.	5½@		10
42 deg.	5	@	8
crystals	15	@	25
Quebracho, solid	4¾@		5½
51 deg.	3¼@		5
42 deg.	3	@	4
Quercitron	3	@	3¼
Persian berry	8½@		12
Sumac	3¼@		7

Comparative Prices.

On Nov. 12, 1897, 1898 and 1899.

Chemicals.	1899.	1898.	1897.
Bleaching powder	$1.75	$1.40	$1.75
Brimstone, 3ds	20.75	19.00	19.50
Caustic soda, 70 p. c.	1.80	1.40	1.75
Caustic soda, 60 p. c.	1.87½	1.80	2.10
Sal soda, Am.	.60	.55	.65
Soda ash, 48 p. c. carb.	.95	.75	.90
Soda ash, 48 p. c caustic	—	1.50	1.10
Soda, alkali, 48 p. c.	.95	.70	.77½
Soda, nitrate	1.75	1.55	1.52
Cream tartar, crystals.	.22¾	.23½	.24
Muriate of potash	1.78	1.78	1.78
Chlorate of potash	.09¼	.09¼	.09½
Kainit	8.70	8.80	8.80
Paints.			
White lead in oil	.06	.05½	.05½
Litharge, Am., pow'd.	.06	.04¾	.05¼
Paris green	.11	.14½	.11½
Orange, mineral	.07¾	.07¾	.06½
Ven. red, English	.01¾	1.50	1.50
Ven. red, American	.80	.60	.60
Barytes	18.00	12.00	14.00
Whiting, commercial	.42½	.35	.35
Drugs.			
Opium	3.07½	3.52½	2.65
Morphine, domestic	1.95	2.05	1.85
Quinine	.27	.20	.28
Alcohol	2.42	2.40	2.27
Borax, city	.07¼	.07	.05¾
Beans, tonca (Aug.)	.65	.90	1.60
Cubeb, XX.	.06	.06	.06½
Cuttlefish	.20	.08½	.07¾
Glycerine, C. P., drums	.14½	.13	.12
Oil, castor, city	.11½	.11	.12½
Oil, codliver, Nor.	26.00	25.00	23.00
Oil, cassia	1.00	1.05	1.30
Oil, peppermint, tins	.90	.80	.90
Oil, sassafras	.40	.34	.41
Quicksilver	.65	.53½	.51¼
Asafoetida	.16	.15	.16
Gum, arabic, sorts	.16½	.16½	.18
Camphor, bbls.	.49	.33½	.37½
Shellac, D. C.	.28	.26	.26
Senna, Alex. Nat'l	.25	.15	.15
Senega root	.40	.30	.30
Ipecac	3.60	2.50	1.70
Jalap	.13	.14	.11
Canary seed, Smyrna	.03	.02¼	.02¾
Caraway seed, Dutch	.06¼	.04¾	.04½
Mustard seed, Cal. yel.	.05¼	.05	.03¾
Rape seed, German	.03½	.02¼	.02½
Oils.			
Cottonseed, prime, S. Y.	.27	.22½	.21½
Olive, Sicily	.53	.49	.54
Cocoanut, Ceylon	.06¼	.05⅞	.05½
Lard, prime, city	.44	.44	.37
Linseed, domestic	.44	.37	.37
Menhaden, prime cde.	.25	.22½	.24
Whale, bl'ch'd, winter	..	.50	.47
Sperm, bleached, winter	.58	.67	.50
Oil, cake, Western	27.00	24.75	24.50
Spirits, turpentine	.51½	.36½	.31
Dyestuffs.			
Bichromate potash, Am	.09½	.09¾	.10¼
Cochineal, Teneriffe, S.	.23	.24	.26
Cutch, bag	.04	.04½	.03½
Gambier	3.00	2.45	2.80
Indigo, Bengal, h. gde.	.85	.85	1.00
Prussiate, potash, yel.	.19¼	.16	.15¼
Sumac, Sicily, prime	68.00	43.00	44.00
Starch, corn	1.55	1.30	1.35

IMPORTS ENTERED IN NEW YORK FOR CONSUMPTION.

Week ending Nov. 9.

ACID, ACETIC—300 dms, Matthew-Kalcher, Br King, Antwerp
CARBOLIC—12 cks, McKesson & Robbins, Toronto, Hull
75 cks, Schoellkopf, H & H Co, Cevic, Liverpool
OXALIC—10 cks, C Bischoff & Co, Graf Waldersee, Hamburg
25 cks, A Klipstein & Co, Kansas City, Swansea
PHTALIC—9 cks, Heller & Merz Co, Spaarndam, Rotterdam
SAL—47 cs, Farb of Elberfeld Co, Friesland, Antwerp
20 cks, 1,443 lbs, Fritzsche Bros, G Waldersee, Hamburg
ALBUMEN—15 bbls, Edinger Bros & Jacobi, Menominee, London
EGG—21 cks, 6,537 lbs, H Lips, G Waldersee, Hamburg.
ALIZARINE—1 ck, V Koechl Co, Friesland, Antwerp
100 cks, Kuttroff, Pickhardt & Co, Friesland, Antwerp
20 cks, V Koechl Co, Spaarndam, R'dam
150 cks, Kuttroff, Pickhardt & Co, Spaarndam, Rotterdam
118 cks, Farb of Elberfeld Co, Spaarndam, Rotterdam
3 cs, Farb of Elberfeld Co, Friesland, Ant
2 puns, B P Ducas Co, Cevic, L'pool
ASS'T—10 cks, 526 gls, C A Johnson & Co, Cevic, Liverpool
ALMOND MEAL—2 cs, Lehn & Fink, Kr Wm II, Genoa
ALUMINA, SULPH—12 cks, A Klipstein & Co, Friesland, Antwerp
25 cks, A Klipstein & Co, Friesland, Ant
AMMONIA, CHLO—20 cks, Schoellkopf, H & H Co, Philadelphian, Liverpool
MURI—15 cks, J L & D S Riker, Cevic, Liverpool
26 cks, Roessler & H Chem Co, Friesland, Antwerp
ANILINE COLORS—8 cks, V Koechl Co, Friesland, Antwerp
182 cks, Kuttroff, Pickhardt & Co, Friesland, Antwerp
7 cks, Kuttroff, Pickhardt & Co, Friesland, Antwerp
51 pkgs, A Klipstein & Co, Friesland, Ant
12 cks, A Klipstein & Co, Friesland, Ant
34 cks, J J Keller & Co, Friesland, Ant
6 bbls, O Hann & Bro, Friesland, Ant
4 bbls, N Y & B Dyewood Co, Friesland, Antwerp
100 cks, Sykes & Street, Friesland, Ant
20 cks, Sykes & Street, Alex Bixio, Havre
122 cks, V Koechl & Co, Spaarndam, Rotterdam
50 pkgs, W J Matheson & Co, Spaarndam, Rotterdam
292 pkgs, Kuttroff, Pickhardt & Co, Spaarndam, Rotterdam
2 cks, C Bischoff & Co, Spaarndam, R'dam
67 cks, C Georgi, Spaarndam, Rotterdam
4 cks, A de Ronde & Co, Spaarndam, Rotterdam
4 cks, C Bischoff & Co, Weimar, Bremen
33 cks, Geisenheimer & Co, Weimar, Bremen
150 pkgs, Farb of Elberfeld Co, Friesland, Antwerp
6 kgs, J J Keller & Co, Friesland, Ant
29 dms, Sykes & Street, St Germain, Havre
15 cks, C Bischoff & Co, Friesland, Ant
11 cks, R Holliday & Sons, Cevic, L'pool
5 kgs, B P Ducas Co, Cevic, Liverpool
3 cks, J Campbell & Co, Noordland, Ant
2 cks, C Georgi, Lahn, Bremen
30 cks, Geisenheimer & Co, Fr der Grosse, Bremen
11 cks, C Bischoff & Co, Fr der Grosse, Bremen
OIL—14 dms, 16,800 lbs, Kuttroff, Pickhardt & Co, Spaarndam, Rotterdam
10 dms, 1,431 gls, J A & W Bird, Toronto, Hull
SALT—28 cks, 11,200 lbs, Kuttroff, Pickhardt & Co, Spaarndam, Rotterdam
ANISEED—46 bls, Parke, Davis & Co, Caprivi, Marseilles
100 bgs, 24,682 lbs, Stallman & Fulton Co, Caprivi, Marseilles
ANNATTO—15 bgs, 1,950 lbs, C Wessels & Bro, Altai, Kingston
ARCHIL—12 cks, 8,432 lbs, R Holliday & Sons, Cevic, Liverpool
ARGOLS—103 cks, C Pfizer & Co, Alex Bixio, Bordeaux
56 cks, Tartar Chemical Co, Alex Bixio, Bordeaux
110 cks, 110,092 lbs, American Tartar Co, Alex Bixio, Bordeaux
BALSAM—8 pkgs, D N Carrington, Allianca, Colon
10 cs, G Amsinck & Co, Allianca, Colon
BARIUM, CHLO—66 cks, 67,289 lbs, Kuttroff, Pickhardt & Co, Spaarndam, Rotterdam
BARYTA NITRATE—6 cks, Chemical Importing Mfg Co, Spaarndam, Rotterdam
BELLADONNA—5 bls, Lehn & Fink, Abbazia, Trieste
BLEACH—140 cks, J L & D S Riker, Cevic, Liverpool
BRISTLES—5 cs, 667 lbs, H Kroehl & Co, New York, Southampton
5 cs, 667 lbs, Flint, Eddy & Co, New York, Southampton
6 cs, 1,323 lbs, F W Von Stade, L'Aquitaine, Havre
9 cks, 2,765 lbs, H Conheim, Graf Waldersee, Hamburg
BRONZE POWDER—3 cs, R F Lang, Weimar, Bremen
5 cs, 2,500 lbs, G Meier & Co, Weimar, Bmn
3 cs, 1,500 lbs, L Uhlfelder, Weimar, Bmn
9 cs, 3,498 lbs, Gerstendorfer Bros, Weimar, Bremen
10 cs, 3,700 lbs, T Reissner, Weimar, Bmn
6 cs, 2,000 lbs, T Reissner, Fr der Grosse, Bremen
5 cs, 2,200 lbs, Gerstendorfer Bros, Fr der Grosse, Bremen
7 cs, L Uhlfelder, Fr der Grosse, Bremen
1 cs, 100 lbs, R F Downing & Co, Fr der Grosse, Bremen
1 cs, 300 lbs, Hensel B & L, Fr der Grosse, Bremen
2 cs, 620 lbs, S Uhlmann, Fr der Grosse, Bremen
25 cs, 3,114 lbs, Baer Bros, Fr der Grosse, Bremen
7 cs, 3,300 lbs, G Meier & Co, Fr der Grosse, Bremen
BUCHU LEAVES—2 bls, 692 lbs, Stallman & Fulton, New York, London
CAFFEINE—5 cs, 500 lbs, Schoellkopf H & H Co, New York, London
CALENDULA FLOWERS—6 bls, Lehn & Fink, Bulgaria, Hamburg
CALCIUM CHLO—40 dms, J L & D S Riker, Cevic, Liverpool
CALOMEL—9 cs, 450 lbs, Schoellkopf, H & H Co, New York, London
CARDAMOMS—1 cs, 19 lbs, Dodge & Olcott, Menominee, London
1 cs, J L Hopkins & Co, St Paul, S'h'ton
CASTOR SEED—1,400 bgs, H J Baker & Bro, Menominee, London
CELERY SEED—100 bgs, 22,000 lbs, Parke, Davis & Co, Caprivi, Marseilles
CHALK, PRECIP—45 pkgs, Schoellkopf H & H Co, Cevic, L'pool
11 cs, 6,784 lbs, Stallman & Fulton Co, Teutonic, L'pool
CHEMICALS—151 pkgs, Merck & Co, Spaarndam, R'dam
2 cs, W J Bush & Co, New York, London
COMPOUND—7 dms, 5,460 lbs, Kuttroff Pickhardt & Co, Friesland, Ant
1 cs, Sykes & Street, Alex Bixio, Havre
7 cs, E Levi, Spaarndam, R'dam
10 dms, 7,800 lbs, Kuttroff Pickhardt & Co, Spaarndam, R'dam
1 cs, Dodge & Olcott, L'Aquitaine, Havre
10 cs, 1,120 lbs, B P Ducas Co, Cevic, L'pool
1 cs, Merck & Co, Lahn, Bremen
2 cs, Merck & Co, Lahn, Bremen
PREP—60 cs, V Koechl Co, Spaarndam, R'dam
2 cks, C Bischoff & Co, Graf Waldersee, H'b'g
2 cs, American Express Co, New York, London
6 cs, McKesson & Robbins, New York, London
25 cks, Roessler & H Chem Co, Spaarndam, R'dam
1 cs, C Bischoff & Co, Friesland, Ant
7 cks, Roessler & H Chem Co, Cevic, L'pool
2 cs, Fischer Chem Imp Co, Kr Wm der Grosse, Bremen
3 pkgs, E Levi, Lahn, Bremen
3 cs, Lehn & Fink, Manitou, London
20 cs, Lehn & Fink, Bulgaria, H'b'g
SALT—12 cks, 7,291 lbs, Kuttroff, Pickhardt & Co, Friesland, Ant
69 cks, A Klipstein & Co, Friesland, Ant
24 cks, Kuttroff, Pickhardt & Co, Spaarndam, R'dam
CHINA CLAY—8 cks, 4 tons, F A Reichard, Cevic, L'pool
188 cks, 94 tons, J B Moors & Co, Cevic, L'pool
5 cks, 2½ tons, L A Saloman & Bro, Cevic, L'pool
CINCHONA BARK—2 cs, Merck & Co, Lahn, Bremen
COAL TAR PREP—2 cks, 1,000 lbs, Kuttroff, Pickhardt & Co, Friesland, Ant
41 cks, V Koechl Co, Spaarndam, R'dam
3 cks, 1,500 lbs, Kuttroff, Pickhardt & Co, Spaarndam, R'dam
COCA LEAVES—139 bls, 19,931 lbs, McKesson & Robbins, Allianca, Colon
38 bls, Schieffelin & Co, Allianca, Colon
COCOA BUTTER—100 cs, 11,200 lbs, Habicht, Braun & Co, New York, London
COLCHICUM SEED—2 bgs, J L Hopkins & Co, Bulgaria, Hamburg
2 bgs, Lehn & Fink, Abbazia, Trieste
2 bgs, Lehn & Fink, Bulgaria, H'b'g
COLOCYNTH—12 cs, 416 lbs, Stallman & Fulton Co, Caprivi, Marseilles
COLORS—6 cs, Jaenecke Bros.' Pr. Ink Co, Weimar, Bremen
3 cks, J Scherdig & Co, Weimar, Bremen
3 cs, G A & E Meyer, New York, London
14 pkgs, Steglich & Baese, Weimar, Br'm'n
30 cks, J Lee Smith & Co, Menominie, L'dn
1 ck, A Klipstein & Co, Cevic, Liverpool
1 cs, Favor, Ruhl & Co, Lahn, Bremen
1 cs, F B Vandergrift & Co, Lahn, Br'm'n
11 cks, Steglich & Baese, Fr der Grosse, Bremen
CONIUM—3 bgs, Lehn & Fink, Abbazia, Tr'ste
CORKWOOD—31 bls, Meinecke & Co, Weimar, Bremen
238 bls, G W Sheldon & Co, Furnessia, Gl'w
400 bls, G W Sheldon & Co, Peninsular, Lisbon
CREOSOTE—2 cs, 40 lbs, McKesson & Robbins, New York, Southampton
CROCUS—50 cks, J L Smith & Co, Toronto, Hull
10 cks, J L Smith & Co, Toronto, Hull
DEXTRINE—191 bgs, 37,267 lbs, W Caldwell & Co, Sardinian, Glasgow
DIGITALIS LEAVES—12 bls, J L Hopkins & Co, Bulgaria, Hamburg
DIVI DIVI—211 bgs, 21,400 lbs, D A de Lima & Co, Prins Maurits, Curacoa
62 bgs, De Sola, Lobo & Co, Prins Maurits, Curacoa
DOGGRASS—15 bls, J L Hopkins & Co, Bulgaria, Hamburg
DRAGON'S BLOOD—2 cs, 353 lbs, A U Andrus & Co, New York, Southampton
DRUGS—3 bls, 1,181 lbs, Stallman & Fulton, New York, Southampton
1 cs, American Express Co, Patricia, H'b'g
2 cs, Lehn & Fink, Bulgaria, Hamburg
DYEWOOD, EXT—10 cks, Sykes & Street, Alex Bixio, Havre
50 cs, Sykes & Street, Alex Bixio, Havre
5 bbls, 11,076 lbs, A de Ronde & Co, Friesland, Antwerp
20 bbls, A Werner, Lahn, Bremen
ERGOT—9 bgs, Parke, Davis & Co, Gottfried Schenker, Trieste
FENNEL SEED—6 bls, Lehn & Fink, Bulgaria, Hamburg
FRANKFURT BLACK—10 cks, C Wix & Co, Spaarndam, Rotterdam
GALLS—25 bgs, 6,261 lbs, Guitermann, Rosenfeld & Co, Mesaba, London
GELATINE—25 cks, 2,730 lbs, P Puttmann, Spaarndam, Rotterdam
GINGER—500 bgs, D P Cruikshank, Maria, Singapore
GLASS, PLATE—11 cs, Pittsburgh Plate Glass Co, Friesland, Ant
27 cs, Bendit, Drey & Co, Friesland, Ant
7 cs, T W Morris, Friesland, Ant
WINDOW—20 cs, 2,700 lbs, Holbrook Bros, St Cuthbert, Ant
GLUE—85 cks, 40,625 lbs, A Hodge & Co, Toronto, Hull
GLYCERINE—40 dms, 42,328 lbs, Marx & Rawolle, Spaarndam, R'dam
50 dms, 55,132 lbs, Marx & Rawolle, Cevic, L'pool
GUM—13 bbls, 4,487 lbs, A de Ronde & Co, Friesland, Ant
10 bbls, 9,773 lbs, F Bredt & Co, Friesland, Ant
1 bg, McKesson & Robbins, New York, S'h'ton
5 cks, Stallman & Fulton, New York, S'h'ton
ALOES—140 cs, 15,126 lbs, D A de Lima & Co, Prins Maurits, Curacoa
15 kgs, McKesson & Robbins, New York, S'h'ton
90 cs, 7,642 lbs, De Sola Lobo & Co, Prins Maurits, Curacoa
12 cs, 1,443 lbs, De Sola Lobo & Co, Prins Maurits, Curacoa
172 cs, 18,294 lbs, Suzarte & Whitney, Prins Maurits, Curacoa
264 cs, 28,728 lbs, Harburger & Stack, Prins Maurits, Curacoa
32 pkgs, Parke, Davis & Co, New York, London
ARABIC—5 bls, David E Green & Co, Kr Wm II, Genoa
22 cs, Thurston & Braidich, Etruria, L'pool
76 cs, Thurston & Braidich, Georgic, L'pool
DAMAR—200 cs, L C Gillespie, Spaarndam, R'dam
GAMBOGE—9 cs, 1,006 lbs, Dodge & Olcott, Menominee, London
OLIBANUM—3 cs, J L Hopkins & Co, St Paul, S'h'ton
KAURI—91 pkgs, A Mason, New York, L'd'n
RED—1 cs, J L Hopkins & Co, St Paul, London
SANDRAC—10 cks, R Hilliers Son Co, Menominee, London
SENEGAL—45 bls, 9,900 lbs, Parke, Davis & Co, New York, London

A. Klipstein & Company

122 Pearl Street, NEW YORK

CHEMICALS AND DYESTUFFS

AGENTS FOR

ANILINE COLORS

Made by the Society of Chemical Industry BASLE.

SAL AMMONIAC

BRANCH HOUSES:

BOSTON, 283-285 Congress St. PHILADELPHIA, 50-52 N. Front St. CHICAGO 136 Kinzie St.
PROVIDENCE, R. I., 13 Mathewson St. CINCINNATI, 215 Walnut St.
HAMILTON, ONT., Catharine St. MONTREAL, 917 Lemoine St.

TRAG—26 cs, Parke, Davis & Co, New York, S'h'ton
64 cs, David E Green & Co, St Paul, S'h'ton
IGNATIA BEANS—4 bgs, J L Hopkins & Co, Bulgaria, H'b'g
INDIGO—75 cks, 29,754 lbs, Kuttroff, Pickhardt & Co, Friesland, Ant
25 cks, 10,000 lbs, Kuttroff, Pickhardt & Co, Spaarndam, R'dam
CARMINE—5 cs, 500 lbs, Kuttroff, Pickhardt & Co, Spaarndam, R'dam
INSECT FLOWERS—35 lbs, J A Stoothoff, G Schenker, Trieste
LAVENDER FLOWERS—17 bls, 2,481 lbs, Peek & Velsor, Caprivi, Marseilles
LEMON JUICE—100 pps, 13,304 lbs, C Pfizer, Pocasset, Leghorn
53 pps, C Pfizer & Co, Gott Schenker, Messina
LICORICE—556 bls, Guiterman & Rosenfeld, Mesaba, London
325 bls, Arguimbau & Ramee, Peninsular, Lisbon
LILY OF THE VALLEY—1 bl, J L Hopkins & Co, Bulgaria, H'b'g
LINDEN FLOWERS—3 bls, Lehn & Fink, Abbazia, Trieste
LIME CITRATE—55 cks, 57,552 lbs, C Pfizer & Co, Pocasset, Genoa
38 cks, 15,820 lbs, C Pfizer & Co, Gott Schenker, Trieste
27 cks, C Pfizer & Co, Gott Schenker, Trieste
LITHOPONE—67 cks, 22,156 lbs, Gabriel & Schall, Spaarndam, R'dam
83 cks, 27,390 lbs, Gabriel & Schall, Fr der Grosse, Bremen
LOGWOOD—25 tons, W & A Leaman, Antilio, Nassau
50 tons, O C Kanzow, Andes, Petit Gonaive
EXT—16 cks, 8,400 lbs, Pim, Forwood & Kellock, Andes, Kingston
MACE—35 cs, J Kissock & Co, Spaarndam, R'dam
ESS'L—9 cs, Fritzsche Bros, Weimar, B'm'n
1 cs, 22 lbs, W J Bush & Co, L'Aquitaine, Havre
2 pkgs, Leeburger Bros, Menominee, London
8 cs, G Luecders & Co, Gottfried Schenker, Messina
5 cs, Magnus & Lauer, Gottfried Schenker, Messina
1 cs, Fritzsche Bros, Graf Waldersee, Hbg
44 cs, A Chiris, St Germain, Havre
2 cs, A Giese & Son, Lahn, Bremen
4 cs, Fritzsche Bros, Fr der Grosse, B'm'n
123 cs, Leeburger Bros, Kr Wm I, Genoa
5 cs, Lehn & Fink, Kr Wm I, Genoa
1 cs, Lehn & Fink, Manitou, London
FENNEL—1 cs, Lehn & Fink, Bulgaria, Hbg
FIR TREE—2 cks, J A Blanchard, Cevic, Lpl
FUSEL—17 cks, 16,435 lbs, Schoellkopf H & H Co, Br King, Antwerp
LAVENDER—5 cs, Dodge & Olcott, L'Aquitaine, Havre
LIMES—4 cs, 461 lbs, Dodge & Olcott, Menominee, London
LINSEED—10 cs, C Helmuth, Spaarndam, Rotterdam
MINERAL—5 bbls, Schoellkopf, H & H Co, Br King, Antwerp
POPPYSEED—2 cs, 156 gls, G A & E Meyer, New York, London
PAINT—12 dms, McCalden Bros, Cevic, L'pool
PALM STEARINE—56 bbls, Jepson & Vogt, Graf Waldersee, Hamburg
PARADISE GRAINS—6 bls, J L Hopkins & Co, Bulgaria, Hamburg
PATENT DRYER—3 cks, J Lee Smith & Co, Toronto, Hull
PEPPER, WHITE—112 bgs, L German & Co, Spaarndam, Rotterdam
PHOSPHATE—1,000 bgs, Heller, Hirsh & Co, Friesland, Ant
PITCH, COAL TAR—356 bgs, Schoellkopf, H & H Co, Laurentian, Glasgow
PIMENTO—356 bgs, Pim, Forward & K, Anders, Kingston
PLUMBAGO—97 bbls, R Lord, Maria, Colombo
397 bbls, Patterson, Boardman & Co, Maria, Colombo
236 bbls, 142,944 lbs, R Crooks & Co, Maria, Colombo
262 bbls, R Lord, Maria, Colombo
368 bbls, H J Baker & Bro, Maria, Colombo
POLISHING PASTE—2 kgs, 148 lbs, C A Johnson, Cevic, Liverpool
POMADE—20 cs, W P Ungerer, L'Aquitaine, Havre
13 cs, W J Bush & Co, L'Aquitaine, Havre
1 cs, Dodge & Olcott, L'Aquitaine, Havre
6 cs, Leeburger Bros, Kr Wm II, Genoa
POPPY SEED—100 bgs, J D Nordlinger, Hekla, Copenhagen
100 bgs, Kaufmann Bros, Hekla, Copenhagen
400 bgs, Rosenstein Bros, Hekla, Copenhagen
POTASH, CARB—60 cks, 64,798 lbs, A Klipstein & Co, Friesland, Ant
30 cks, J L & D S Riker, Cevic, Liverpool
25 cks, Roessler & H Chem Co, Friesland, Antwerp
CHLO—200 kgs, J L & D S Riker, Cevic, Liverpool
180 kgs, 20,160 lbs, Rendrock Powder Co, Hekla, Copenhagen
MURI—1,430 bgs, 319,631 lbs, H J Baker & Bro, Weimar, Bremen
500 bgs, 50 tons, H H Salmon & Co, Bulgaria, Hamburg
1,500 bgs, 150 tons, H H Salmon & Co, Fr der Grosse, Bremen
PRUSS—25 cks, 12,500 lbs, C de P Field, Sardinian, Glasgow
SULPH—1,350 bgs, 135 tons, H H Salmon & Co, Fr der Grosse, Bremen
QUEBRACHO BARK—4 bgs, J L Hopkins & Co, Bulgaria, Hamburg
QUININE—34 cs, 34,000 ozs, E Levi, Spaarndam, Rotterdam
15 cs, 15,000 ozs, Stallman & Fulton, New York, London
124 cs, 49,600 ozs, Winter & Smillie, Spaarndam, Rotterdam
86 cs, 43,000 ozs, G W Sheldon & Co, Fr der Grosse, Bremen
RESORCIN—12 cks, V Koechl Co, Spaarndam, Rotterdam
RHUBARB—21 cs, R Hillier's Son & Co, Indravilli, Shanghai
36 cs, Parke, Davis & Co, Indravilli, Shanghai
27 cs, Stallman & Fulton, Indravilli, Shanghai
13 cs, McKesson & Robbins, Indravilli, Shanghai
RHUE HERB—3 bls, J L Hopkins & Co, Bulgaria, Hamburg
ROSEWATER—25 cs, Lehn & Fink, Kr Wm II, Genoa
SAGE—10 bls, 4,407 lbs, Stallman & Fulton Co, Pocasset, Bari
25 bls, 10,864 lbs, F H Leggett & Co, Pocasset, Bari
SALTPETRE—250 bgs, Ralli Bros, Maria, C'tta
SARSAPARILLA—2 bls, A U Andrus & Co, New York, London
SENNA—7 bls, 2,461 lbs, McKesson & Robbins, New York, Southampton
15 bls, Parke, Davis & Co, New York, S'h'n
27 bls, 10,053 lbs, Parke, Davis & Co, New York, Southampton
22 bls, 9,273 lbs, Stallman & Fulton Co, New York, Southampton
52 bls, 15,299 lbs, Stallman & Fulton Co, Maria, Calcutta
25 bls, 15,182 lbs, Lehn & Fink, Maria, Calcutta
10 bls, J L Hopkins & Co, St Paul, S'h'ton
SHELLAC—100 chts, G A Alden & Co, Maria, Calcutta
250 chts, 18,417 lbs, G A Alden & Co, Maria, Calcutta
47 chts, M Feigel & Bro, Maria, Calcutta
1,242 chts, Berry Bros, Maria, Calcutta
SODA, ASH—40 cks, J L & D S Riker, Cevic, Liverpool
ARSENIATE—5 cks, 3,306 lbs, C A Johnson & Co, Cevic, Liverpool
CAUSTIC—75 dms, 56,250 lbs, E Hills Son & Co, Cevic, Liverpool
PRUSS—32 cks, A Klipstein & Co, Philadelphian, Liverpool
SAL—42 pkgs, 12,074 lbs, B P Ducas Co, Llandaff City, Bristol
140 cks, Wing & Evans, Georgic, L'pool
SALT—25 hhds, 17,925 lbs, J Campbell & Co, Menominee, London
ST JOHN'S BREAD—100 bls, G Amsinck & Co, Pocasset, Trieste
11 bls, R F Downing & Co, Pocasset, Trieste
STRONTIA CARB—22 cks, Chemical Imp & Mfg Co, Spaarndam, Rotterdam
NITRATE—6 cks, Chemical Imp & Mfg Co, Sparndam, Rotterdam
SPONGE—27 bls, A Isaacs & Co, Vincenzo Florio, Genoa
17 bls, A Moses Sons & Co, City of Washington, Havana
STEEL WOOL—40 bls, Buehne Steel Wool Co, Br King, Antwerp
SULPHUR, ORE—7,648,686 lbs, Penna Salt Mfg Co, Murcia, Huelva
SUMAC—EXT—50 bbls, 26,248 lbs, J J Keller & Co, Friesland, Antwerp
50 cks, 26,912 lbs, G W Sheldon & Co, Cevic, Liverpool
40 cks, 21,010 lbs, Sykes & Street, Kr Wm II, Genoa
TALLOW—81 tcs, 34,706 lbs, Sanderson & Son, Toronto, Hull
TOLUIDINE—21 dms, A Klipstein & Co, Friesland, Antwerp
ULTRAMARINE—15 cks, C F Zentgraf, Pocasset, Trieste
URANIUM—2 cs, 200 lbs, L Feuchtwanger, Fr der Grosse, Bremen
VARNISH—3 cks, C Helmuth, Spaarndam, Rotterdam
VASOGEN—3 cs, Lehn & Fink, Bulgaria, H'b'g
VANILLA BEANS—12 cs, W J Bush & Co, L'Aquitaine, Havre
2 cs, David E Green & Co, St Paul, S'h'ton
WHITE LEAD—18 cks, 11,741 lbs, J Lee Smith & Co, Toronto, Hull
100 cks, J Lee Smith & Co, Menominee, London
WORMWOOD—2 bgs, J L Hopkins & Co, Bulgaria, H'b'g
ZINC OXIDE—50 cks, 22,046 lbs, Gabriel & Schall, Spaarndam, R'dam
20 cks, 2,205 lbs, G A & E Meyer, Friesland, Ant
2 cs, 168 lbs, McKesson & Robbins, New York, S'h'ton
45 cks, J Lee Smith & Co, Toronto, Hull
75 cks, 33,069 lbs, H W Henning & Son, Friesland, Ant

WAREHOUSED.

ANILINE COLORS—3 cks, C Bischoff & Co, Noordland, Antwerp
31 pkgs, Farb of Elberfeld Co, Noordland, Antwerp
BRONZE POWDER—10 cs, 5,000 lbs, G Meier & Co, Frier, Bremen
12 cs, 5,280 lbs, G Benda & Co, Columbia, Hamburg
12 cs, 5,281 lbs, G Benda & Co, Columbia, Hamburg
CHEMICAL COMPOUND—5 cs, C Deutsch, Graf Waldersee, Hamburg
CHILLIES, 100 bgs, 11,200 lbs, J Kissock, Graf Waldersee, Hamburg
COLORS—4 cs, Favor, Ruhl & Co, Frier, Bremen
DEXTRINE—300 bgs, 65,145 lbs, C Morningstar & Co, Hekla, Stettin
100 bgs, 21,715 lbs, C Morningstar & Co, G Waldersee, Hamburg
GUM, CHICLE—199 bgs, 22,847 lbs, H Marquardt & Co, Vigilancia, Vera Cruz
MICA—5 chts, 360 lbs, Ralli Bros, Maria, Calcutta
OIL, CODLIVER—100 bbls, 3,000 gls, Parke, Davis & Co, Toronto, Hull
OPIUM—39 cs, 5,968 lbs, G Gulbenkian & Co, Philadelphian, Liverpool
14 cs, 2,326 lbs, Dodge & Olcott Co, New York, Southampton
SAGE—40 bls, 17,617 lbs, Stallman & Fulton Co, Pocasset, Naz
THORIUM NITRATE—10 cs, Kennedy & Moon, Columbia, Hamburg

Withdrawals from Bond.

Week ending Nov. 9.

Aniline Colors, cks	174
Aniline Colors, cs	11
Aniline Colors, kgs	12
Bristles, cks	7
Bronze Powder, cs	35
Canary Seed, bgs	230
Capsicums, bgs	66
Chemical Compound, cs	3
Color, cs	1
Cork, bls	70
Dextrine, bgs	100
Ether, cs	4
Glass, Plate, cs	2
Glue, cks	13
Gum, Chicle, bgs	91
Licorice Paste, cs	62
Logwood Ext., cks	42
Menthol, cs	1
Oil, Codliver, bbls	60
Oil, Tar, cks	50
Opium, cs	6
Potash, Cyanide, cs	500
Sage, bls	27
Sago Flour, bgs	100
Sponge, bls	28
Thorium Nitrate, cs	1

Boston Imports.

ACID, CRUDE—100 cks, Norwegian, Glasgow
AMMONIA—1 cs, Stone & Donner Co, Virginian, London
ANILINE COLOR, DRY—15 cks, W N Proctor & Co, Winifredian, L'pool
OIL—5 drs, J A & W Bird & Co, Winidian, L'pool
SALT—36 cks, J A & W Bird & Co, Winifredian, L'pool
28 cks, Winifredian, Liverpool
BLEACH—696 cks, J L & D S Riker, Sachem, Liverpool
48 cks, J L & D S Riker, Winifredian, L'pool
CHALK—180 tons, Virginian, London
CHINA CLAY—200 cks, New England, Liverpool
1 ck, Richard Briggs & Co, New England, Liverpool
200 cks, Morey & Co, Winifredian, L'pool
CARBON SULPH—60 drs, Virginian, London
COLOR—6 pkgs, Virginian, London
COMPOSITION—2 cks, Winifredian, L'pool
CRYSTALS—15 cs, J A Hayes & Co, Virginian, London
CUTCH—50 bxs, Warren & Co, Sachem, L'pool
496 bxs, Ivernia, Liverpool
DYESTUFF—9 cks, 1 cs, W N Proctor & Co, Norwegian, Glasgow
GUM—14 cs, Virginian, London
IRON OXIDE—150 bgs, J Lee Smith & Co, Ivernia, L'pool
OIL—30 bbls, Norwegian, Glasgow
50 bbls, 5 drs, Virginian, London
28 bbls, Brown Bros & Co, Virginian, London
COD—90 bbls, Prince Arthur, Yarmouth, N S
RECOVERED—30 bbls, Underhay Oil Co, New England, L'pool
SOD—50 bbls, Booth & Co, Ivernia, L'pool
PEPPER—51 bgs, Virginian, London
PITCH—250 cks, 450 bbls, Virginian, London
RED LEAD—14 cks, Chadwick Lead Wks, New England, L'pool
10 cks, Chadwick Lead Wks, Ivernia, Liverpool
SOAP, SOFT—35 tcs, New England, L'pool
SODA, ASH—39 cks, Sachem, Liverpool
25 tcs, 200 bgs, Winifredian, Liverpool
BICARB—50 cks, Linder & Meyer, Winifredian, Liverpool
CHLORATE—300 kgs, J L & D S Riker, Sachem, L'pool
CRYSTALS—280 cks, Wing & Evans, Winifredian, L'pool
SULPHUR—1,002 bgs, Winifredian, Liverpool
TANNING EXTRACT—5 cks, Morey & Co, Winifredian, L'pool
WAX, CARNAUBA—107 bgs, Brown Bros & Co, New England, Liverpool
5 bgs, New England, Liverpool

Philadelphia Imports.

AMMONIA, MURIATE—20 cks, Chas Lennig & Co, Rhynland, Liverpool
20 cks, Rhynland, Liverpool
SULPHATE—239 bgs, Rhynland, Liverpool
ANILINE SALT—43 cks, O S Janney & Co, Hilltarn, Rotterdam
BARIUM BINOXIDE—13 cks, Hilltarn, R'dam
BLEACH—97 cks, J L & D S Riker, Rhynland, Liverpool
126 cks, Rhynland, Liverpool
CHEMICALS—84 cbys, Roessler & H Chem Co, Hilltarn, Rotterdam
5 cks, Hilltarn, Rotterdam
COCOA BUTTER—45 bls, Hilltarn, Rotterdam
FUSTIC—223 tons, Sharpless, D E Co, Laura, Black River
KRYOLITE—1,180 tons, Pa Salt Mfg Co, Alkaline, Ivigtut
LOGWOOD—390 tons, Sharpless, D E Co, Laura, Black River
MANGANESE—59 tons, Rhynland, Liverpool
OIL, PALM—19 cks, Rhynland, Liverpool
TAR—50 cks, Hilltarn, Rotterdam
PEPPER—100 bgs, Hilltarn, R'dam
RAPE SEED—515 bgs, Hilltarn, R'dam

Cream of Tartar Tartaric Acid

GUARANTEED 99—100 Per Cent. Pure.

TARTAR CHEMICAL COMPANY, 47 Cedar St. N. Y.

TINNOL, A Paste that Sticks

NO Rust Spots on Tin. NO Peeling Off. NO Discoloring of Labels.
WRITE FOR SAMPLE AND PRICES TO
The Arabol Manufacturing Co., 155 William Street, NEW YORK.
Headquarters for SIZING, PASTES, GUMS and MUCILAGES for all purposes.

POTASH
CYANIDE
PRUSSIATE
CARBONATE
CAUSTIC and
All Heavy and Fine Chemicals

Soda Ash
Soda Prussiate
Sal Soda
Caustic Soda
Etc.

ACID
Acetic
Phosphoric
Carbolic
Etc.

Extracts
Gums

PRECIP. CHALK

IMPORTERS—Commission Merchants—EXPORTERS.

FUERST BROS. & CO.

2 Stone St., NEW YORK, & 17 Bridge St.

Bleaching Powders

MINERALS
Fluorspar
Fullers Earth
China Clay
Barytes, Etc.

OILS
CASTOR
OLIVE
RAPE
COCOANUT
ESSENTIAL.

CORRESPONDENCE SOLICITED.

RED LEAD—19 cks, Hilltarn, R'dam
65 cks, Jno Lucas & Co, Hilltarn, R'dam
SALT, CAKE—273 cks, Rhynland, L'pool
SODA, ASH—600 bgs, Wing & Evans, Rhynland, Liverpool
SIL—51 cks, Rhynland, Liverpool
TAR, COAL—200 bbls, Rhynland, L'pool

Baltimore Imports.

AMMONIA—2,197 bgs, Indrani, Glasgow
BAUXITE—1,145 bgs, Tampico, R'dam
CHEMICALS—225 pkgs, Vedamore, L'pool
CLAY—481 cks, Vedamore, Liverpool
SOAP—30 bxs, Vedamore, Liverpool
SODA, NITRATE—35,684 bgs, Bellalisa, Caleta Buena

Newport News Imports.

BLEACH—357 cks, J L & D S Riker, Shenandoah, Liverpool
CHINA CLAY—300 cks, Hammill & G, Shenandoah, Liverpool
201 cks, G A Clark, Shenandoah, L'pool
50 cks, Jno Knight, Shenandoah, L'pool
IRON, OXIDE—1 ck, Heath & Milligan, Shenandoah, Liverpool
15 cks, Wilfred, S & Co, Shenandoah, L'pool
OIL, COCOANUT—230 bbls, Proctor & Gamble Co, Shenandoah, Liverpool
VENETIAN RED—100 bbls, J Lee Smith, Shenandoah, Liverpool

New Orleans Imports.

GLASS, WINDOW—154 cs, Hermann, Ant
SODA, NITRATE—147 bgs, Hermann, Ant
STEARINE—127 bgs, Hermann, Antwerp

San Francisco Imports.

ACID, OXALIC—15 cks, Balfour G & Co, Cortez, Antwerp
15 cks, Port Patrick, Liverpool
ALUM—206 bbls, Port Patrick, Liverpool
280 bbls, Balfour G & Co, Port Patrick, Liverpool
AMMONIA, SULP—250 bgs, Yates & Co, Silverhorn, Newcastle
1,477 bgs, Port Patrick, Liverpool
ARSENIC—20 bbls, Port Patrick, Liverpool
COLOR—8 cks, W P Fuller & Co, Port Patrick, Liverpool
EPSOM SALTS—100 cks, Balfour G & Co, Cortez, Antwerp
FERTILIZER—5,200 bgs, Balfour G & Co, Cortez, Antwerp
1,000 bgs, Port Patrick, Liverpool
GLAUBER SALTS—25 cks, Balfour G & Co, Cortez, Antwerp
GLYCERINE—75 drs, Port Patrick, Liverpool
OIL—30 cs, Port Patrick, Liverpool
PALM—5 cks, Balfour G & Co, Port Patrick, Liverpool
SPERM—65 bbls, S F Whaling Co, Gayhead, Behring Sea
1,400 bbls, J & W R Wing, Chas W Morgan, Okhotsk
PAINT—200 drs, C J Hendry, Port Patrick, Liverpool
POTASH, CAUSTIC—50 drs, Balfour G & Co, Cortez, Antwerp
5 cks, Port Patrick, Liverpool
PUMICE—60 bbls, Bass H P Co, Port Patrick, Liverpool
SALTPETER—25 cks, Balfour G & Co, Port Patrick, Liverpool
SODA, CAUSTIC—150 drs, Yates & Co, Silverhorn, Newcastle
420 drs, 563 cks, 90 bxs, Port Patrick, Liverpool
20 drs, 20 bbls, 10 bxs, D S Ricker, Port Patrick, Liverpool
100 drs, Balfour G & Co, Port Patrick, Liverpool
HYPO—300 kgs, Balfour G & Co, Cortez, Antwerp
SIL—300 bgs, Port Patrick, Liverpool
SUPERPHOSPHATES—2,000 bgs, Balfour G & Co, Cortez, Antwerp
VENETIAN RED—100 bbls, 15 cks, Yates & Co, Silverhorn, Newcastle
200 bbls, Port Patrick, Liverpool

Montreal Imports.

ACID, ACETIC—15 crts, Parisian, Liverpool
AMMONIA, CARB—10 bbls, Parisian, L'pool
MUR—22 cks, Dominion, Liverpool
BLEACH—32 cks, Dominion, Liverpool
BORAX—210 cks, Dominion, Liverpool
38 cks, Parisian, Liverpool
BRIMSTONE—668 bgs, Lake Superior, L'pool
CHEMICALS—200 bbls, 367 pkgs, Dominion, Liverpool
CHINA CLAY—380 cks, Dominion, Liverpool
350 cks, 75 bgs, Parisian, Liverpool
CREAM TARTAR—3 cks, Rosarian, London
EPSOM SALTS—105 bbls, 90 kgs, Buenos Ayrean, Glasgow
FUSTIC EXT—50 cks, Alcides, Glasgow
GLASS—19 cs, Parisian, Liverpool
PLATE—14 cs, Dominion, Liverpool
WINDOW—1,157 cs, Parisian, Liverpool
388 cs, Dominion, Liverpool
GLUE—14 cks, Parisian, Liverpool
INDIAN RED—8 cks, Parisian, Liverpool
IRON OXIDE—9 cks, Parisian, Liverpool
LOGWOOD—300 bgs, Alcides, Glasgow
EXT—120 cks, Parisian, Liverpool
NITRATE, LEAD—38 cks, Alcides, Glasgow
OIL—8 cks, Dominion, Liverpool
COD LIVER—36 bbls, 28 hf bbls, Alcides, Glasgow
PAINT—9 cks, Parisian, Liverpool
PITCH—723 cks, Buenos Ayrean, Glasgow
417 cks, Rosarian, London
POTASH, BICH—83 cks, Alcides, Glasgow
CHLOR—75 kgs, Dominion, Liverpool
SHELLAC—20 cs, Rosarian, London
SOAP—768 cs, Rosarian, London
SODA, ASH—1,102 pkgs, Dominion, London
284 cks, Lake Superior, Liverpool
BICARB—180 bgs, 800 kgs, Lake Superior, Liverpool
CAUSTIC—207 cks, 35 bbls, Dominion, L'pool
300 drs, Parisian, Liverpool
CRYSTALS—100 bgs, Dominion, Liverpool
PHOS—3 cks, Buenos Ayrean, Glasgow
200 pkgs, Lake Superior, Liverpool
VENETIAN RED—40 bbls, Parisian, Liverpool
WHITING—562 bbls, 290 bgs, 1,100 cks, Rosarian, London

EXPORTS FROM NEW YORK.

Week ending Nov. 8.

ACID, ACETIC—2 cbys, $14, Altai, Cartagena
CARBOLIC—3 bbls, $20, Santiago de Cuba, Cuba
SALICYLIC—2 cs, $30, Altai, Kingston
STEARIC—16 bgs, $252, Advance, Colon
SULPHURIC—5 cbys, $23, Silvia, St Johns
TARTARIC—175 kgs, $5,025, Melbourne, Sydney
ALCOHOL—5 bbls, $117, Advance, Colon
AMMONIA—6 drs, $332, Grenada, Trinidad
1 dr, $50, Advance, Colon
ASPHALTUM—600 bgs, 15 bbls, $4,451, Graf Waldersee, Hamburg
BARK, EXTRACT—50 bbls, $582, Trier, Bremen
75 bbls, $1,113, Philadelphian, Liverpool
50 bbls, $3,130, Cymric, Liverpool
CALCIUM CARBIDE—20 drs, $72, Amana, Calcutta
204 drs, $578, Melbourne, Sydney
CANDLES—3 crts, $47, Cherokee, San Domingo
10 cs, $20, Grenada, C Bolivar
1 crt, $11, Tjomo, Hayti
2 crts, $21, Advance, Colon
100 cs, $542, Cornwall, Sydney
1 cs, $7, Silvia, St Johns
13 crts, $133, Arnold Luyken, Demerara
10 crts, $109, Prins Maurits, Hayti
2 cs, $15, Prins Maurits, Trinidad
15 cs, $75, Prins Maurits, Carupano
5 crts, $52, Prins Maurits, Paramaribo
6 crts, $64, Alps, Hayti
2 cs, $8, Pretoria, Bermuda
3 crts, $30, Altai, Port Limon
CARBON—1 cs, $15, Hekla, Copenhagen
CASSIA—8 bls, $41, Caracas, Porto Rico
1 bl, $6, Prins Maurits, Carupano
CHEMICALS—32 cks, $4,350, Menominee, London
CLOVES—1 bl, $10, Caracas, Porto Rico
COPPER, SULPHATE—100 cs, $530, Q Margaret, Valparaiso
DEXTRINE—16 bgs, $120, Rowena, Sydney
DYEWOOD, EXTRACT—66 bbls, $1,388, Cymric, Liverpool
24 bxs, $281, Hesperia, Genoa
5 cks, $336, Weathersfield, Melbourne
6 kgs, 3 cs, $143, Graf Waldersee, H'burg
FERTILIZER—3 bbls, $13, Trier, Bremen
50 bgs, $185, Antilia, Nassau
410 bbls, 340 bgs, $1,391, Pretoria, Bermuda
FLAXSEED—16,674 bush, $26,000, Kansas City, Bristol
8,020 bush, $12,500, Toronto, Hull
16,676 bush, $26,000, Spaarndam, Amsterdam
42,043 bush, $67,000, Spaarndam, R'dam
1,961 bush, $3,000, Graf Waldersee, H'burg
GLUCOSE—50 bbls, $570, Rowena, Sydney
150 bbls, $1,050, Kansas City, Bristol
150 bbls, $1,047, Wells City, Bristol
77 bbls, $805, Cornwall, Sydney
125 bbls, $1,295, Inchulva, Cape Town
500 bbls, $4,000, Sardinian, Glasgow
5 bbls, $53, Santiago de Cuba, Cuba
200 bbls, $2,775, Lord Antrim, Cape Town
520 bbls, $4,842, Menominee, London
440 bbls, $3,300, Toronto, Hull
GLUE—100 bbls, $1,547, Noordland, Antwerp
1 bbl, $38, Tjomo, Hayti
1 bbl, $34, Vigilancia, Havana
4 bbls, $83, Silvia, Halifax
16 bbls, $250, Aker, Hamburg
20 cks, $1,000, Trier, Bremen
20 cks, $1,000, Weimar, Bremen
1 bbl, $35, British King, Antwerp
GLYCERINE—2 drs, $315, Gymeric, Kobe
GRAPE SUGAR—2,320 bgs, $4,040, Llandaff City, Bristol
3,422 bgs, $6,844, Wells City, Bristol
300 bgs, $600, New York, Southampton
2,008 bgs, $4,016, Kansas City, Bristol
500 bgs, $1,000, Toronto, Hull
GREASE, SOAP—325 tcs, $5,100, Hesperia, Marseilles
50 tcs, $890, Ydun, Progreso
75 tcs, $1,300, Aker, Hamburg
75 tcs, $950, Graf Waldersee, Hamburg
LUB—150 cs, 22 kgs, $503, Melbourne, Sydney
6 kgs, 6 cs, $65, Advance, Colon
37 cs, $271, Cornwall, Sydney
12 cs, $42, Cornwall, Wellington
2 bbls, 5 cs, $35, Silvia, St Johns
100 bbls, $1,150, Q Margaret, Coronel
20 kgs, $160, Q Margaret, Callao
125 cs, $262, Inchulva, Cape Town
10 kgs, $26, Seguranca, Havana
29 kgs, $80, Santiago de Cuba, Cuba
12 bbls, 17 cs, $347, Menominee, London
64 cs, $181, Melbourne, Melbourne
20 bbls, 20 cs, $706, Graf Waldersee, H'burg
20 cs, $29, Altai, Port Limon
MINERAL—110 bbls, $1,812, Cymric, L'pool
685 bbls, $4,110, Philadelphian, L'pool
KALSOMINE—33 cs, $313, Melbourne, Sydney
12 cs, $114, Cornwall, Sydney
52 cs, $303, Inchulva, East London
LAMP BLACK—2 bbls, $16, Ithaka, Tampico
3 bbls, $20, Ydun, Progreso
LEAD—4,793 pigs, 448,166 lbs, $17,500, Cymric, Liverpool
2,403 pigs, 224,097 lbs, $8,500, Pocasset, Trieste
2,337 pigs, 224,048 lbs, $8,100, Br King, Ant
1,917 pigs, 167,816 lbs, $6,210, Campania, Liverpool
15,951 pigs, 1,478,775 lbs, $51,594, Graf Waldersee, Hamburg
LIME, ACETATE—1,638 bgs, $4,300, Noordland, Antwerp
1,634 bgs, $3,920, Cymric, Liverpool
256 bgs, $525, Toronto, Hull
1,845 bgs, $4,800, Graf Waldersee, H'burg
MILK, SUGAR—8 bbls, $225, L'Aquitaine, Havre
30 cs, $650, Spaarndam, Rotterdam
10 cs, $216, Graf Waldersee, Hamburg
OIL, ALMOND—1 cs, $5, Ithaka, Tampico
ANIMAL—10 bbls, $300, Weimar, Bremen
CAKE—3,374 bgs, $9,982, Noordland, Antwerp
2,768 bgs, $7,100, Victoria, Havre
5,237 bgs, $17,595, Victoria, Dunkirk
4,145 bgs, $12,810, Br King, Antwerp
1,688 bgs, $4,770, Spaarndam, Rotterdam
COCOANUT—4 kgs, $30, Advance, Colon
12 bbls, $216, Melbourne, Sydney
75 bbls, $1,500, Spaarndam, Rotterdam
COD—6 bbls, $70, Rowena, Sydney
30 bbls, $470, Aker, Hamburg
569 bbls, $1,100, Br King, Antwerp
CODLIVER—1 bbl, $22, Arnold Luyken, Demerara
CORN—540 bbls, $11,880, Noordland, Antwerp
319 bbls, $5,050, Br King, Antwerp
125 bbls, $1,250, Menominee, London
110 bbls, $1,000, Toronto, Hull
COTTONSEED—55 bbls, $1,135, Rowena, Sydney
65 bbls, $1,285, Cymric, Liverpool
19 bbls, 196 cs, $886, Cherokee, San Domingo
1,000 bbls, $23,325, Hesperia, Marseilles
20 bbls, 75 cs, $755, Grenada, Trinidad
5 bbls, 5 cs, $114, Advance, Colon
10 bbls, $229, Cornwall, Sydney
30 cs, $196, Q Margaret, Puenta Arenas
425 bbls, $9,800, Aker, Hamburg
48 bbls, $952, Arnold Luyken, Demerara
60 cs, $297, Inchulva, Cape Town
50 bbls, $1,500, Trier, Bremen
779 bbls, $23,070, Philadelphian, Liverpool
100 bbls, $2,000, Talisman, Guadeloupe
200 bbls, $4,000, Talisman, Martinique
100 bbls, $1,875, Sardinian, Glasgow
30 bbls, $600, Weimar, Bremen
100 bbls, $1,413, Eastern Prince, Santos
200 bbls, $4,900, Hekla, Copenhagen
150 bbls, $1,500, Br King, Antwerp
50 cs, $240, Lord Antrim, Cape Town
560 bbls, $10,124, Pocasset, Malta
150 bbls, $2,643, Pocasset, Alexandria
1,000 bbls, $22,362, Pocasset, Venice
1,398 bbls, $28,282, Pocasset, Trieste
648 bbls, $9,800, Toronto, Hull
50 bbls, $893, Spaarndam, Rotterdam
52 bbls, $1,075, Melbourne, Sydney
15 bbls, 174 cs, $969, Altai, Kingston
2 bbls, 40 cs, $215, Altai, Port Limon
CYLINDER—10 bbls, $90, Arnold Luyken, Demerara
ESS'L—1 cs, $48, Ithaka, Tampico
14 cs, $467, Menominee, London
1 cs, $45, Melbourne, Sydney
39 cs, $2,054, Graf Waldersee, H'b'g
1 cs, $12, Altai, Kingston
FISH—50 bbls, $1,000, Graf Waldersee, H'b'g
LARD—4 bbls, $86, Cherokee, San Domingo
1 bbl, $25, Tjomo, Hayti
5 bbls, $121, Vigilancia, Havana
30 cs, $180, Q Margaret, Callao
9 bbls, $280, Arnold Luyken, Demerara
417 cs, $2,948, Inchulva, East London
110 tcs, 50 bbls, $4,725, Toronto, Hull
10 bbls, $210, Graf Waldersee, H'b'g
LINSEED—1 cs, $8, Cherokee, Turks Island
1 bbl, $33, Caracas, Porto Rico
2 bbls, 6 cs, $122, Grenada, Trinidad
2 cs, $20, Ithaka, Tampico
2 bbls, $72, Vigilancia, Vera Cruz
10 bbls, $385, Santiago de Cuba, Cuba
3 bbls, 3 cs, $119, Alps, Hayti
8 bbls, $180, Menominee, London
55 bbls, 3 cs, $216, Altai, Port Limon
LUB—50 bbls, $310, Rowena, Sydney
225 bbls, $5,100, Cymric, L'pool
23 bbls, $140, Melbourne, Adelaide
65 cs, $218, Melbourne, Sydney
25 cs, 617 bbls, $5,108, Hekla, Copenhagen
50 bbls, $320, Hesperia, Marseilles
50 bbls, $650, Gymeric, Yokohama
474 bbls, $3,318, Noordland, Antwerp
2 bbls, $24, Grenada, Trinidad
15 cs, $30, Advance, Colon
317 bbls, 313 cs, $4,481, Cornwall, Sydney
15 bbls, 20 cs, $148, Cornwall, Wellington
280 bbls, $2,105, Ithaka, Tampico
1,000 bbls, $5,995, Victoria, Havre
2,946 bbls, $17,675, Victoria, Dunkirk
2,467 bbls, 150 cs, $14,447, Amana, Calcutta
25 bbls, $335, Amana, Colombo
63 bbls, 25 cs, $917, L'Aquitaine, Havre
40 bbls, $375, Vigilancia, Havana
24 cs, $70, Vigilancia, Campeche
10 bbls, $181, Q Margaret, Colon
10 bbls, 50 cs, $314, Q Margaret, Callao
60 bbls, 275 cs, $2,573, Q Margaret, Valparaiso
2 cs, $30, Roraima, Barbadoes
240 bbls, $1,120, Aker, Hamburg
40 bbls, $524, Arnold Luykens, Demerara
20 bbls, 609 cs, $1,501, Inchulva, Cape Town
608 bbls, $3,682, Philadelphian, Liverpool
25 cs, $54, Seguranca, Havana
95 bbls, $1,319, Inchdune, Calcutta
187 bbls, $1,927, Inchdune, Bombay
2,100 bbls, $15,681, Vincenzo Florio, Genoa
889 bbls, $6,265, Furnessia, Glasgow
400 bbls, $2,400, Hekla, Gothenburg
298 bbls, $3,375, Eastern Prince, Santos
18 bbls, $264, Santiago de Cuba, Cuba
9 bbls, 28 cs, $550, Lord Antrim, Cape Town
767 bbls, $6,418, Menominee, London
561 bbls, $3,365, Pocasset, Fiume
2,216 bbls, $16,018, Toronto, Hull
100 bbls, $600, Spaarndam, Amsterdam
1,495 bbls, 20 cs, $11,696, Spaarndam, Rotterdam
175 bbls, 7 cs, $943, Melbourne, Sydney
1,546 bbls, $16,793, Graf Waldersee, H'b'g
14 bbls, $225, Altai, Cartagena
7 bbls, $213, Altai, Port Limon
MEAL—150 bgs, $305, Grenada, San Fernando
945 bgs, $1,807, Grenada, Trinidad
20 bgs, 25 bbls, $119, Arnold Luykens, Demerara
3 bgs, 2 bbls, $13, Pretoria, Bermuda
40 bgs, $85, Altai, Kingston
MIN'L COLZA—10 cs, $24 Cherokee, Turks Island
40 bbls, $240, Noordland, Ant
25 bbls, $150, Victoria, Havre
600 cs, $879, Inchulva, East London
120 bbls, $720, Furnessia, Glasgow
105 bbls, $630, Hekla, Copenhagen
36 bbls, $180, Pocasset, Venice
50 bbls, $300, Toronto, Hull
50 bbls, $300, Spaarndam, R'dam
NEATSFOOT—5 cs, $32, Advance, Colon
5 bbls, $130, Vigilancia, Havana
75 bbls, $750, Graf Waldersee, Hamburg
OLEO—210 tcs, 60 bbls, $7,876, Cymric, L'pool
100 tcs, $2,528, Hekla, Copenhagen
150 tcs, $4,461, Hekla, Stettin
75 bbls, $2,000, Noordland, Antwerp
50 tcs, $1,626, Silvia, St Johns
120 tcs, $4,000, Trier, Bremen
100 tcs, $3,670, Philadelphian, L'pool
345 tcs, $7,670, Sardinian, Glasgow
1,090 tcs, $32,275, Hekla, Copenhagen
140 tcs, $4,225, Hekla, Aarhuus
100 tcs, $3,000, Hekla, Bergen
35 tcs, $1,050, Hekla, Drontheim
70 tcs, $2,050, Hekla, Stavanger
360 tcs, $9,235, Toronto, Hull
1,598 tcs, $48,163, Spaarndam, R'dam
615 tcs, $16,594, Graf Waldersee, Hamburg
PALM—4 kegs, $30, Advance, Colon
2 bbls, $48, Altai, Port Limon
PEP—20 cs, $1,225, Menominee, London
22 cs, $1,727, Graf Waldersee, Hamburg
RED—300 bbls, $3,500, Victoria, Havre
SASSAFRAS—1 cs, $25, Toronto, Hull
SEWING MACH—16 cs, $82, Rowena, Sydney
22 cs, $79, Cornwall, Sydney
30 cs, $68, Vigilancia, Vera Cruz
3 cs, $7, Q Margaret, Iquique
2 cs, $8, Inchulva, East London
50 cs, $240, Menominee, London
13 cs, $90, Melbourne, Sydney
SPERM—54 cks, $4,520, Sardinian, Glasgow
TALLOW—5 bbls, $127, Vigilancia, Havana
300 bbls, $1,500, Br King, Antwerp
270 bbls, $4,900, Graf Waldersee, Hamburg
PAINT—2 cs, $20, Cherokee, Turks Island
1 bbl, $22, Atalanta, Porto Rico
10 cs, $145, Gymeric, Yokohama
4 cs, $44, Ithaka, Tampico
3 cs, $20, Vigilancia, Havana
3 bbls, $29, Silvia, Halifax
5 bbls, $95, Silvia, St Johns
24 cs, $311, Inchulva, Cape Town
3 bbls, 2 cs, $104, Santiago de Cuba, Cuba
10 cs, 12 kgs, $170, Alps, Hayti
28 cs, $514, Melbourne, Sydney
17 cs, $165, Altai, Kingston
PAPER FINISH—8 pkgs, $125, Campania, Liverpool
PEPPER—5 bgs, $20, Caracas, Porto Rico
PETROLEUM—(See Petroleum Clearances on page 22)
PETROLEUM JELLY—10 bbls, $80, New York, Southampton
6 cs, $140, Cornwall, Sydney
6 bbls, $70, Toronto, Hull
PIMENTO—429 bgs, $4,055, Weimar, Bremen
100 bgs, $945, Toronto, Hull
PITCH—25 bbls, $50, Rowena, Sydney
5 bbls, $10, Grenada, Trinidad
30 bbls, $53, Arnold Luykin, Demerara
3 bbls, $5, Prins Maurits, Paramaribo
6 bbls, $12, Alps, Hayti
6 bbls, $11, Pretoria, Bermuda
40 bbls, $105, Melbourne, Sydney
2 bbls, $3, Altai, Port Limon
PLUMBAGO—2 bbls, $34, Amana, Calcutta
2 bbls, 5 cs, $27, Menominee, London
2 bbls, $83, Toronto, Hull
ROSIN—10 bbls, $31, Gottfried Schenker, Trieste
50 bbls, $176, Pocasset, Beyrouth, Syria
2 bbls, $4, Tjomo, Hayti
25 bbls, $73, Grenada, Trinidad
305 bbls, $874, Advance, Colon
25 bbls, $64, Amana, Calcutta
2 bbls, $6, Vigilancia, Vera Cruz
228 bbls, $1,166, Silvia, Halifax
230 bbls, $909, Q Margaret, Corral
200 bbls, $766, Q Margaret, Coronel
50 bbls, $221, Prins Maurits, Porto Cabello
1 bbl, $4, Prins Maurits, Carupano
450 bbls, $1,500, Eastern Prince, Pernambuco
24 bbls, $113, Aips, Hayti
2 bbls, $15, Altai, Cartagena
52 bbls, $189, Altai, Port Limon
SARSAPARILLA—7 bls, $306, Aker, Hamburg
SIZING—60 bbls, $1,148, Victoria, Havre
84 bbls, $1,547, Spaarndam, Rotterdam
SOAP—29 cs, $64, Cherokee, Turks Island
49 cs, $111, Cherokee, San Domingo
2 cs, $40, Caracas, La Guayra
6 cs, $22, Noordland, Antwerp
4,206 bxs, $2,420, Tjomo, Hayti
25 cs, $118, Oceanic, Liverpool
50 bxs, $80, Grenada, San Fernando
298 cs, $585, Grenada, Trinidad
104 cs, $398, Caracas, Porto Rico
7 cs, $362, Advance, Colon
70 cs, $2,425, Cornwall, Sydney
15 cs, $239, Cornwall, Wellington
1 cs, $10, Ithaka, Tampico
8 cs, $176, Vigilancia, Havana
1 cs, $15, Vigilancia, Vera Cruz
2 cs, $50, Ydun, Progreso
2 cs, $40, Queen Margaret, Mollendo
250 cs, $540, Queen Margaret, Iquique
28 bxs, $47, Arnold Luyken, Demerara
94 cs, $671, Inchulva, Port Natal
4,674 bxs, $2,923, Prins Maurits, Hayti
111 bxs, $199, Prins Maurits, Paramaribo
1,500 bxs, $945, Belvernon, Hayti
1,000 bxs, $2,500, Furnessia, Glasgow
3 cs, $66, Hekla, Copenhagen
57 cs, $133, Santiago de Cuba, Cuba
278 bbls, $2,750, Campania, Liverpool
2 cs, $50, Lord Antrim, Cape Town
3,831 bxs, $2,693, Alps, Hayti
866 cs, $2,529, Menominee, London
25 cs, 2 bbls, $122, Pretoria, Bermuda
18 cs, $1,112, Melbourne, Sydney
36 bxs, $40, Graf Waldersee, Hamburg
40 cs, $129, Altai, Cartagena
22 cs, $194, Altai, Kingston
100 cs, $279, Altai, Port Limon
STOCK—5 bbls, $38, Vigilancia, Campeche
SODA—2,000 bags, $1,800, Gymeric, Yokohama
ASH—100 bbls, $331, Vigilancia, Vera Cruz
10 bbls, $36, Altai, Port Limon
CAUSTIC—4 drs, $67, Vigilancia, Campeche
10 drs, $214, Prins Maurits, Porto Cabello
6 drs, $134, Alps, Hayti
SPERMACETI—50 bxs, $953, Graf Waldersee, Hamburg
SPONGE—127 bls, $2,800, Noordland, Ant
20 bls, $265, Furnessia, Glasgow
40 bls, $795, Spaarndam, Rdam
STARCH—125 bbls, 200 bags, $1,680, Cymric, Liverpool
6 bxs, $10, Cherokee, Turks Island
4 bxs, $5, Hekla, Copenhagen
125 bags, $500, Landaff City, Bristol
3 bbls, $21, Tjomo, Hayti
75 bxs, 25 bags, $199, Caracas, Porto Rico
10 cs, $16, Advance, Colon
2 bbls, $16, Cornwall, Wellington
15 bxs, $16, Vigilancia, Frontera
1 bbl, 4 cs, $14, Silvia, St Johns
200 bags, $112, Philadelphian, Lpool
200 bags, $113, Maskelyne, Manchester
1,000 bags, $2,561, Furnessia, Glasgow
800 bags, $952, Br King, Ant
8 cs, $13, Alps, Hayti
1,400 bags, 10 bbls, $5,206, Menominee, Ldn
75 cs, $185, Spaarndam, Rdam
64 cs, 5 bbls, $130, Pretoria, Bermuda
80 bxs, $90, Altai, Kingston
10 cs, 5 bbls, $44, Altai, Port Limon
STEARINE—22 bags, $380, Tjomo, Hayti
COTTONSEED—200 bbls, $4,640, Aker, Hbg
30 bbls, $635, Furnessia, Glasgow
TALC—87 bbls, $323, Vigilancia, Vera Cruz
TALLOW—200 hhds, 70 tcs, $13,103, Cymric, Liverpool
1 bbl, $27, Cherokee, San Domingo
400 tcs, $7,092, Hesperia, Marseilles
70 bxs, $264, Grenada, San Fernando
35 tcs, 15 cs, $666, Grenada, Trinidad
27 kegs, 4 cs, $214, Advance, Colon
10 bbls, $129, Q Margaret, Callao
30 tcs, $878, Laconia, Bahia
50 hhds, 325 tcs, $9,750, Aker, Hbg
2 cks, $52, Arnold Luyken, Demerara
1 tc, $22, Prins Maurits, Paramaribo
65 bbls, $1,229, Alps, Hayti
70 tcs, $900, Toronto, Hull
68 tcs, $1,100, Spaarndam, Rdam
3 bbls, $59, Altai, Port Limon
TANNING EXT—2 bbls, $89, Rowena, Sydney
TAR—30 bbls, $130, Rowena, Sydney
6 bbls, $8, Tjomo, Hayti
15 bbls, $60, Grenada, Trinidad
8 bbls, 10 cs, $58, Ithaka, Tampico
2 bbls, $11, Vigilancia, Frontera
4 bbls, $21, Q Margaret, Pisco
20 bbls, $106, Arnold Luyken, Demerara
30 cs, $48, Santiago de Cuba, Cuba
5 bbls, $23, Alps, Hayti
COAL—200 bbls, $400, Vigilancia, Havana
2 bbls, $10, Alps, Hayti
TURPENTINE—600 cs, $2,475, Rowena, Sydney
6 cs, 3 cks, $100, Grenada, Trinidad
37 cs, $183, Advance, Colon
400 cs, $1,676, Cornwall, Sydney
2 cs, $9, Ithaka, Tampico
325 cs, $1,613, Q Margaret, Iquique
350 cs, $1,581, Q Margaret, Callao
200 cs, $1,050, Leonard Parker, Rio Grande do Sul

Antussin (Difluordiphenyl) Ointment)
Fluoroform Water
C. BISCHOFF & CO., 87—89 Park Place, New York.

209 cs, $1,152, Inchulva, Cape Town
7 cs, $34, Prins Maurits, Carupano
6 cs, $34, Santiago de Cuba, Cuba
10 cs, $48, Lord Antrim, Cape Town
1 cs, $7, Alps, Hayti
1 bbl, $24, Pretoria, Bermuda
135 cs, $627, Melbourne, Sydney
22 cs, $128, Altai, Kingston
3 cs, $15, Altai, Port Limon

VARNISH—200 gls, $248, Melbourne, Sydney
30 gls, $60, Atalanta, Porto Rico
1,536 gls, $1,889, Cornwall, Sydney
240 gls, $190, Cornwall, Wellington
90 gls, $76, Vigilancia, Havana
320 gls, $258, Vigilancia, Vera Cruz
60 gls, $59, Q Margaret, Valparaiso
340 gls, $527, Indradevi, Melbourne
380 gls, $470, Inchulva, Cape Town
5,662 gls, $2,155, Furnessia, Glasgow
2,574 gls, $1,996, Kansas City, Bristol
79 gls, $82, Hekla, Copenhagen
360 gls, $502, Hekla, Stockholm
100 gls, $73, Santiago de Cuba, Cuba
162 gls, $186, Spaarndam, Rdam
100 gls, $120, Melbourne, Melbourne
44 gls, $49, Altai, Port Limon

WAX, PAR—45 bbls, $670, Noordland, Ant
24 bags, $214, Advance, Colon
250 cs, $3,000, Cornwall, Sydney
472 bbls, $7,110, Philadelphian, Lpool
200 bbls, $2,845, Furnessia, Glasgow
36 bbls, $555, Hekla, Gothenburg
80 bbls, 200 bags, $3,540, Pocasset, Trieste
432 bbls, $6,165, Toronto, Hull
25 bags, $300, Spaarndam, Rdam
10 bags, $170, Altai, Kingston
30 bags, $502, Altai, Port Limon

WHALEBONE—115 bdls, $27,500, Kaiser Wilhelm der Grosse, Bremen
6 bdls, $806, L'Aquitaine, Havre
120 bdls, $28,001, Trier, Bremen

WHITE LEAD—30 kegs, $108, Vigilancia, Havana

WHITING—1 bbl, $2, Tjomo, Hayti
4 bbls, $8, Santiago de Cuba, Cuba

WOOD FILLER—5 bbls, $163, Furnessia, Glasgow

ZINC ASHES—160 bbls, $440, Kansas City, Bristol

DROSS—577 slabs, $1,500, Spaarndam, Rdam
OXIDE—200 bbls, $2,000, Philadelphian, Lpol
200 bbls, $2,000, Kansas City, Bristol
SKIMMINGS—33 bbls, $600, Kansas City, Bristol

Boston Exports.

ACID—1 dr, $2, Halifax, Halifax
LACTIC—20 bbls, $493, Saxon King, Ant
BONEBLACK—143 bags, $400, J C Colewell, St John, N B
CANDLES—2 bxs, $6, Lothair, Carbonear, N F
FERTILIZER—111 bags, 120 bbls, $402, Earl D, Wolfville, N S
FLAXSEED—58,693 bu, $49,362, Saxon King, Antwerp
11,893 bu, $9,990, Columbian, Lpool
GLUE—1 keg, $4, Halifax, Halifax
22 bags, $165, Saxon King, Ant
GLUCOSE—50 bbls, $450, Bohemian, Lpool
5 bbls, $50, Barrowmore, London
GREASE—30 bbls, $350, Sylvania, Lpool
50 tcs, $806, Ontario, Hull
GROUND BONE—1,382 bags, $1,656, Earl D, Wolfville, N S
LAMPBLACK—186 bbls, $1,116, Sylvania, Liverpool
LOGWOOD—20 bags, $50, Halifax, Halifax
OIL—4 bbls, $20, Emma C Potter, Clementsport, N S
2 bbls, $10, Annie, Salmon River, N S
CAKE—924 sks, $2,852, Saxon King, Ant
LARD—4 bbls, $120, Admiral Farragut, Jamaica
MINERAL COLZA—50 bbls, $304, Bohemian, Liverpool
OLEO—200 tcs, $5,200, Saxon King, Ant
SPERM—3 bbls, $27, Prince Arthur, Yarmouth, N S
TALLOW—176 tcs, $3,977, Saxon King, Ant
PAINT—16 pkgs, $54, Halifax, Halifax
7 cs, $112, Lothair, Carbonear, N F
PITCH—60 bbls, $166, Halifax, Halifax
15 bbls, $33, Lothair, Carbonear, N F
POTASH, MURIATE—9 bags, $41, Earl D, Wolfville, N S
ROSIN—1 bbl, $2, Lothair, Carbonear, N F
SOAP—30 bxs, $61, J C Colewell, St John, N B
24 cs, $3,015, Barrowmore, London
11 bxs, $36, Admiral Farragut, Jamaica
SODA, BICARB—400 pkgs, $975, Halifax, Halifax
STARCH—6 bbls, $67, Halifax, Halifax
1 bbl, $12, Adm Farragut, Jamaica
TALLOW—200 tcs, $4,500, Bohemian, Lpool
94 tcs, $1,480, Saxon King, Ant
60 bbls, $1,169, Barrowmore, London
TAR, COAL—100 bbls, $200, J C Colewell, St John, N B
TURPENTINE—1 bbl, $25, Lothair, Carbonear, N F
WAX—2 pkgs, $13, Halifax, Halifax
1 bbl, 15 kegs, $50, Barrowmore, London

Philadelphia Exports.

BARK, EXTRACT—108 bbls, Assyria, H'burg
BONE BLACK—50 bbls, Ikbal, Liverpool
GLUCOSE—10 bbls, Ikbal, Liverpool
25 bbls, Assyria, Hamburg
GRAPE SUGAR—500 bgs, Montauk Point, London
GREASE—215 bbls, Montauk Point, London
100 tcs, Euxinia, Rotterdam
350 tcs, 10 bbls, Assyria, Hamburg
20 bbls, Minnesota, London
MINERAL—75 bbls, Ikbal, Liverpool
PET—786 bbls, 60 cks, Ikbal, Liverpool
LIME, ACETATE—428 bgs, Bogor, Rotterdam
OIL, CAKE—1,457 bgs, Euxinia, Rotterdam
2,164 bgs, Bogor, Rotterdam
CORN—440 bbls, Assyria, Hamburg
LUB—400 bbls, Montauk Point, London
760 bbls, Ikbal, Liverpool
793 bbls, Euxinia, Rotterdam
470 bbls, Corean, Glasgow
2,081 bbls, Assyria, Hamburg
1,029 bbls, Minnesota, London
560 bbls, $2,063, Bogor, Rotterdam
MEAL—700 bgs, $962, Bogor, Rotterdam
MIN'L COLZA—1,000 bbls, Montauk Point, London
100 bbls, Euxinia, Rotterdam
100 bbls, Corean, Glasgow
200 bbls, Assyria, Hamburg
250 bbls, Minnesota, London
355 bbls, $1,455, Bogor, Rotterdam
MIN'L SPERM—150 bbls, Ikbal, Liverpool
100 bbls, Minnesota, London
NEATSFOOT—3 bbls, Ikbal, Liverpool
12 bbls, Euxinia, Rotterdam
OLEO—625 tcs, Euxinia, Rotterdam
30 tcs, Corean, Glasgow
RED—75 bbls, $1,365, Bogor, Rotterdam
SOAP—607 pkgs, Montauk Point, London
50 bbls, Euxinia, Rotterdam
TALLOW—200 tcs, Ikbal, Liverpool
150 tcs, Euxinia, Rotterdam
65 tcs, Corean, Glasgow
200 tcs, Assyria, Hamburg
WAX, PAR—132 bbls, Montauk Point, London
1,140 bbls, Ikbal, Liverpool
250 bgs, Euxinia, Rotterdam
100 bbls, 1,300 bgs, Assyria, Hamburg
426 bbls, 30 bgs, $9,938, Bogor, Rotterdam

Baltimore Exports.

ACID—100 cbys, R D Bibber, Cienfuegos
BARK—10 bls, Knight Commander, London
EXTRACT—37 bbls, Coblenz, Bremen
55 bbls, Tabasco, Rotterdam
CARBON—50 bbls, Knight Commander, London
GRAPE SUGAR—10,000 bgs, Knight Commander, London
3,849 bgs, Noranmore, Liverpool
OIL, CAKE—2,891 bgs, Lord Ormonde, Belfast
8,055 bgs, Tabasco, Rotterdam
MEAL—1,935 bgs, Noranmore, Liverpool
OLEO—2,075 tcs, Tabasco, Rotterdam
ROSIN—2,000 bbls, Coblenz, Bremen
600 bbls, Noranmore, Liverpool
STARCH—125 bgs, Knight Commander, L'don
2,950 pkgs, Tabasco, Rotterdam
600 bgs, Noranmore, Liverpool
TANKAGE—20 bgs, Knight Commander, L'don
WAX, PAR—100 bbls, Tabasco, Rotterdam

Savannah Exports.

COTTONSEED—295 bgs, $340, Wastewater, Liverpool
MEAL—2,240 bgs, $2,000, Puritan, Bremen
3,940 bgs, $3,696, Wastewater, L'pool
2,240 bgs, $5,000, Asama, Bremen
OIL, ROSIN—900 bbls, $5,573, S P Shotter Co, Norrskenet, Rotterdam
150 bbls, $959, Asama, Bremen
PHOSPHATE—3,295 tons, $36,245, Puritan, Bremen
2,001 tons, $20,020, Aldersgate, Bremen
2,027 tons, $30,405, Asama, Bremen
PITCH—25 bbls, 25 cs, $227, S P Shotter Co, Norrskenet, Rotterdam
ROSIN—1,500 bbls, $3,770, Puritan, Bremen
2,732 bbls, $8,546, Paterson, D & Co, Sylvia, Hamburg
3,280 bbls, $8,175, S P Shotter Co, Norrskenet, Rotterdam
1,400 bbls, $3,585, Pydna, Manchester
1,700 bbls, $5,222, Wastewater, Liverpool
5,291 bbls, $13,914, Paterson, D & Co, Alert, Antwerp
1,000 bbls, $2,640, Aldersgate, Bremen
1,000 bbls, $2,663, Asama, Bremen
TURPENTINE—3,996 cks, $81,437, Paterson, D Co, Sylvia, Hamburg
2,785 cks, $58,702, S P Shotter Co, Norrskenet, Rotterdam

Newport News Exports.

OIL, COTTONSEED—78,000 gls, $27,300, Cluden, Rotterdam
29,470 gls, $13,815, Apolo, Hamburg
LARD—96,000 gls, $54,720, Cluden, R'dam

Wilmington Exports.

ROSIN—6,758 bbls, $8,763, Jupiter, London
TAR—250 cks, $813, Jupiter, London

Norfolk, Va., Exports.

COTTONSEED MEAL—5,600 bgs, $6,500, Cluden, Rotterdam
11,200 bgs, $13,000, Hughenden, London
GASOLINE—1,000 gls, Jessica, Nombres de Dios
OIL, CORN—252 bbls, $2,620, Cluden, R'dam
TALLOW—100 tcs, $1,821, Cluden, R'dam

New Orleans Exports.

COTTONSEED, CAKE—843 bgs, Alacrity, Hull
7,656 bgs, Inchmoor, Aarhuus
33,000 bgs, Inchmoor, Copenhagen
878 bgs, Clematis, Liverpool
728 bgs, Numidia, Hamburg
MEAL—6,750 bgs, Alacrity, Hull
19,040 bgs, Clematis, Liverpool
7,480 bgs, Numidia, Hamburg
400 tons, Tampican, Liverpool
OIL—2 bbls, Sumniva, Bluefields
3 bbls, Breifond, Celba,
11 bbls, Foxhall, Porto Cortez
1 bbl, Hiram, Bluefields
COTTONSEED—10,400 bbls, California, Marseilles
ROSIN—217 bbls, Tampican, Liverpool
750 bbls, Torr Head, Belfast
SOAP—819 bbls, Nicaraguan, Liverpool
TALLOW—120 bbls, Repton, Havre

Galveston Exports.

COTTONSEED, CAKE—13,586 bgs, $28,782, Ida, Liverpool
2,797 bgs, $4,900, Peerless, Bremen
1,579 bgs, $3,192, Borkum, Bremen
919 bgs, $2,688, Woodbridge, Hamburg
MEAL—3,550 tons, $53,500, Horsa, Bremen
11,225 bgs, $9,450, Ida, Liverpool
827 bgs, $2,352, Ethelbrytha, Havre
38,807 bgs, $44,688, Peerless, Bremen
12,695 bgs, $21,197, Borkum, Bremen
3,908 bgs, $12,731, Banes, Esbjerg, Den
59,483 bgs, $72,502, Woodbridge, Hamburg

San Francisco Exports.

ACID—2 drs, City of Puebla, Br Columbia
1 tank, Colon, Central America
3 tanks, Colon, Panama
AMMONIA—39 cyls, Alameda, Sydney
CANDLES—1 box, Colon, Central America
5 bxs, Australia, Tahiti
GREASE—3 bbls, J C Pfluger, Sydney
3 cs, Australia, Tahiti
OIL—2 cs, Una, Clipperton Is
345 cs, 3 bbls, Colon, Central America
80 bbls, J C Pfluger, Sydney
35 bbls, Alameda, Sydney
5 cs, Alameda, Apia
19 cs, Australia, Tahiti
COCOANUT—10 bbls, Colon, Mexico
LUB—10 bbls, Alameda, Newcastle
PAINT—11 kegs, Colon, Central America
178 cs, Alameda, Sydney
3 cs, Australia, Tahiti
PITCH—3 bbls, Colon, Central America
PUTTY—2 bbls, Alameda, Apia
SOAP—130 bxs, Colon, Central America
100 lbs, Alameda, Apia
195 bxs, Australia, Tahiti
SODA—1,250 lbs, Colon, Central America
CAUSTIC—5 drs, Colon, Mexico
STARCH—11 cs, Colon, Central America
TALLOW—16,034 lbs, Colon, Central America
VARNISH—1 bbl, Colon, Central America
2 cs, Alameda, Sydney
2 cs, Alameda, Melbourne
1 cs, Australia, Tahiti
WHITE LEAD—24 kegs, Colon, Central Amer
50 kegs, J C Pfluger, Sydney
50 kegs, Alameda, Sydney

To New York.

ASPHALTUM—263 bbls, Colon
PAINT—11 cs, Colon

Montreal Exports.

FLAXSEED—25,202 bu, Albanian, Ant
16,774 bu, Iona, Newcastle

CHARTERS.

Following is a list of vessels chartered at the principal ports during the past week to convey products to or from American ports:—

BRIMSTONE—Br str Thos Melville, Sicily to north of Hatteras, 10s

FERTILIZER—Br sch Sam Slick, from Elizabethport to Bridgetown, $2 and tonnage
Sch Jennie Thomas, hence to Savannah, $1
Sch Eagle, from Elizabethport to Bangor, in bbls, $.75

PHOSPHATE—Br str Jas Turpie, Tampa to Helsingborg, 28s
Str Eureka, Philadelphia to north of Hatteras, p t
Ital str Ludovich, Fernandina to Stettin, 22s
Sch Marie Palmer, from Tampa to Baltimore, $2.25

QUEBRACHO WOOD—Ital bk Letizia, from Colastine to New York, $6

NEW YORK DOMESTIC RECEIPTS.

Week ending Nov. 8.

ALCOHOL—85 bbls, J A Webb & Son, D, L & W R R
WOOD—96 bbls, 6 drs, W S Gray, E R R
BARK—1,000 bags, export, O D S S L
300 bags, order, O D S S L
EXTRACT—60 bbls, order, O D S S L
BARYTES—228 bbls, order, O D S S L
BEESWAX—5 bbls 1 bag, order, O D S S L
1 box, order, P R R
1 box, order, D, L & W R R
5 bbls, order, Wilmington
BONEBLACK—289 bags, G F Taylor & Co, New Orleans
1,072 bags, Arbuckle Bros, P R R
MEAL—300 bags, E Thomas & Co, P R R
210 bbls, Holt & Co, P R R
BORAX—410 bags, Pacific C B Co, New Orleans
CLAY—840 bags, 54 cks, order, O D S S L
377 cks, International Paper Co, Charleston
228 cks, R McNamee & Co, Charleston
36 cks, order, Charleston
CASCARA SAGRADA—102 bags, export, New Orleans
CASSIA—25 bls, order, H R R R
FLAXSEED—27 cars, order, L V R R
70 bbls, T R Bagot, H R R R
45 cars, H C Hebert & Co, W S R R
GREASE—100 bbls, W D Vandenhove & Co, E R R
239 bbls, order, F R L
65 bbls, export, L V R R
15 bbls, order, P R R
HIGHWINES—200 bbls, Ridgewood Dist Co, H R R R
80 bbls, Steinhardt Bros & Co, H R R R
320 bbls, Nat Dist Co, P R R
80 bbls, Lanman & K, P R R
160 bbls, Steinhardt Bros & Co, P R R
250 bbls, Amer Dist Co, D, L & W R R
80 bbls, J A Webb & Son, D, L & W R R
240 bbls, F O Boyd & Co, D, L & W R R
80 bbls, Fishel & L, L V R R
20 bbls, Engel H & Co, L V R R
80 bbls, P W Eng's Sons, B & O R R
120 bbls, Cook & B Co, L V R R
98 bbls, United W & T Co, L V R R
120 bbls, Merchants Dist Co, L V R R
LAMP BLACK—17 bbls, order, Savannah
LEAD—5,280 pigs, Amer S & R Co, New Orleans
1,700 pigs, Balbach S & R Co, New Orleans
MUSTARD SEED—50 bgs, E F Driggs & Co, H R R R
OIL, CAKE—5,250 bgs, 17 cars, export, D, L & W R R
679 bgs, H Ellsworth, L V R R
2 cars, 1,070 bgs, export, L V R R
1,600 bgs, Richard & S, Canal
COTTONSEED—3,310 bbls, 305 cs, order, Savannah
383 bbls, order, O D S S L
104 bbls, export, O D S S L
500 bbls, Williams F & Co, Charleston
500 bbls, Elbert & G, Charleston
200 bbls, export, Galveston
FISH—100 bbls, order, O D S S L
32 bbls, N B Cook, P R R
LINSEED—112 bbls, Amer Linoleum Co, D, L & W R R
60 bbls, J W Masury & Son, D, L & W R R
60 bbls, C M Childs & Co, D, L & W R R
120 bbls, Macy & D, H R R R
60 bbls T R Bagot, H R R R
60 bbls, Ben Moore, D, L & W R R
120 bbls, Sampson & Co, D, L & W R R
60 bbls, Fr Beck, D, L & W R R
60 bbls, E Climer & Co, D, L & W R R
LUB—175 bbls, order, C R R of N J
120 bbls, O G Hempstead & Son, H R R R
120 bbls, O G Hempstead & Son, W S R R
60 bbls, Hagemeyer & B, P R R
OLEO—85 tcs, order, P R R
487 tcs, export, D, L & W R R
821 tcs, export, W S R R
1,295 tcs, export, L V R R
225 tcs, export, E R R
150 tcs, export H R R R
RED—300 bbls, export, D, L & W R R
300 bbls, order, O D S S L
ROSIN—190 bbls, order, Savannah
PITCH—80 bbls, order, Savannah
POTASH—7 cks, order, H R R R
10 cks, order, W S R R
35 cks, B P Ducas & Co, Balto Trans Co
3 cks, order, P R R
5 cks, order, D, L & W R R
PRUSS YEL—39 cks, order, O D S S L
RAPE SEED—280 bgs, E F Driggs & Co, H R R R
ROSIN—598 bbls, order, O D S S L
1,333 bbls, order, Savannah
99 bbls, Baily & M, Brunswick
31 bbls, Tolar, H & Co, Georgetown
111 bbls, Baily & M, Wilmington
60 bbls, Tolar, H & Co, Wilmington
700 bbls, C B Turton & Co, Jacksonville
600 bbls, M W Larendon, Jacksonville
34 bbls, West Coast N S Co, Jacksonville
SHEEP DIP—1,000 bgs, export, O D S S L
SPELTER—1,120 slabs, order, O D S S L
1,398 slabs, Hendricks Bros, P R R
SPONGE—72 bls, order, Savannah
35 bls, Lasker & B, Key West
3 bls, order, Key West
STARCH—956 bxs, Nat Starch Co, H R R R
1,900 bxs, 25 bbls, Oswego Starch Co, D, L & H R R
625 pkgs, Cushman Bros Co, H R R R
STEARINE—37 hhds, Wilcox Ld Ref Co, P RR
TALLOW—368 tcs, export, P R R
29 tcs, W D Vandenhove & Co, D, L & W R R
140 bbls, W D Vandenhove & Co, P R R
10 bbls, 120 tcs, W D Vandenhove & Co, F R L
74 tcs, H W Calef, F R L
18 bbls, order, W S R R
28 bbls, J Stern & Son, P R R
10 bbls, order, P R R
10 bbls, order, F R L
25 tcs, export, L V R R
13 hhds, 28 bbls, order, C R R of N J
TAR—73 bbls, order, Savannah
171 bbls, order, O D S S L
50 bbls, Baily & M, Georgetown
20 bbls, F W Blossom, Wilmington
COAL—100 bbls, Nat Coal Tar Co, Charleston

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IMPORTING DEPARTMENT.

TRIPOLI—65 bgs, 9 bbls, order, O D S S L
TURPENTINE—87 bbls, order, O D S S L
1,935 bbls, order, Savannah
8 bbls, S P Shotter Co, Charleston
24 bbls, Baily & M, Brunswick
781 bbls, Paterson, D & Co, Brunswick
81 bbls, Tolar, H & Co, Georgetown
42 bbls, L Breslauer, Georgetown
51 bbls, Baily & M, Georgetown
9 bbls, S P Shotter Co, Wilmington
50 bbls, F S Clark, Wilmington
26 bbls, C A Woolsey Co, Wilmington
29 bbls, order, Wilmington
40 bbls, Baily & M, Wilmington
30 bbls, Tolar, H & Co, Wilmington
24 bbls, F W Blossom, Wilmington
17 bbls, West Coast N S Co, Jacksonville
82 bbls, Baily & M, Jacksonville
VANILLA BEANS—18 cs, export, New Orleans
11 cs, order, New Orleans

Total Domestic Receipts.

At New York for week ending Nov. 8, 1900.

	For week.	Since Jan. 1.
Alcohol, bbls	85	3,374
Beeswax, pkgs	13	699
Boneblack, bgs	1,361	19,550
Borax, bgs	410	231,058
Cottonseed, bgs	....	81
Ashes, bgs	....	4,559
Cake, bgs	....	.....
Hulls, bgs	....	.....
Meal, bgs	....	69,527
Flaxseed, bu	38,370	754,964
Glucose, bbls	....	5,177
Glue, pkgs	....	2,262
Grease, pkgs	419	32,221
Highwines, bbls	1,928	78,226
Lead, pigs	6,980	609,274
Mustard seed, pkgs	50	12,309
Oil cake, bgs	11,659	289,409
Cottonseed, bbls	5,118	265,939
Fish, bbls	132	6,323
Lard, bbls	....	3,053
Lubricating, bbls	475	26,998
Oleo stock, tcs	3,063	162,426
Pitch, bbls	80	4,800
Quicksilver, flks	....	9,255
Rosin, bbls	3,566	308,287
Soap stock, bbls	....	10,034
Spelter, pcs	2,518	129,966
Sponges, bls	110	9,861
Starch, pkgs	3,506	170,186
Stearine, pkgs	37	7,154
Sumac, bgs	....	9,231
Tallow, pkgs	875	49,593
Tar, bbls	314	24,714
Turpentine, crude, bbls	....	882
Spirits, bbls	3,316	105,718

Boston Domestic Receipts.

Week ending Nov. 7.

GREASE—52 bbls
TALLOW—103 bbls

Baltimore Domestic Receipts.

Week ending Nov. 7.

CLAY—1,859 bgs, Savannah
OIL, COTTONSEED—10 bbls, Savannah
ROSIN—80 bbls, Savannah
PITCH—80 bbls, Savannah
ROSIN—835 bbls, Savannah
TURPENTINE—227 bbls, Savannah

Charleston Domestic Receipts.

Week ending Nov. 7.

ROSIN—7 bbls
TURPENTINE—12 cks

Savannah Domestic Receipts.

Week ending Nov. 7.

ROSIN—15,844 bbls
TURPENTINE—5,066 cks

Wilmington Domestic Receipts.

Week ending Nov. 7.

ROSIN—1,729 bbls
TAR—859 bbls
TURPENTINE—343 cks
CRUDE—528 bbls

San Francisco Domestic Receipts.

Week ending Nov. 3.

OCHER—5 cks, Cal Paint Co, from N Y via Panama
OIL—2 bbls, F Arata, from Genoa via N Y
64 bbls, from N Y via Panama
35 bbls, S F Weeks, from N Y via Panama
LUB—164 bbls, from N Y via Panama
PAINT—1 bbl, 1 keg, Cal Paint Co, from N Y via Panama
SODA—50 drs, from N Y via Panama
CAUSTIC—180 drs, from N Y via Panama
VARNISH—15 bbls, from N Y via Panama

TOTAL IMPORTS AT NEW YORK.

In the following table we give the total imports, in packages unless otherwise specified, and their values at the port of New York, for the week ending Nov. 9, 1900:

	Quantity.	Value.
Bottles	....	$3,121
Glassware	1,319	33,820
Glass, plate	76	9,862
Window	615	1,345
L. G. plates	37	4,711
Slate, mf of	11	267
Acid, carbolic	87	1,008
Citric	100	8,747
Oxalic	215	7,001
Salicylic	57	1,054
All other	356	3,981
Aniline colors	1,613	88,820
Salt	124	3,389
Ammonia, muriate of	55	2,427
Sal	20	852
Sulph	850	4,208
Argols	2,500	84,509
Albumen	45	4,356
Alizarine	392	26,460
Balsam, all other	18	1,355
Bark, all other	32	63
Barytes, other	16	519
Bleach powder	436	3,449
Bronze powder	....	14,309
Buchu leaves	2	145
Butter, cocoa	275	8,861
Chalk	....	498
Chemical salts	290	7,695
Chicory	40	656
Citrate of lime	55	7,132
Cinchonidia	39	14,911
Coca leaves	247	10,539
Cobalt	5	1,797
Colocynth	12	601
Cocaine	2	4,060
Cudbear	4	210
Cuttlefish bone	118	1,387
Dragon's blood	2	143
Dextrine	691	4,443
Divi Divi	277	430
Dyewood, extract of	103	1,994
Fish sounds	2	95
Flowers, insect	30	1,220
Lavender	24	152
All other	169	2,067
Fuller's earth	400	285
Gelatine	333	5,796
Glucose	3	45
Glycerine	90	6,986
Gum arabic	171	4,598
Aloes	733	3,193
Chicle	199	5,598
Damar	300	4,293
Guiac	3	50
Kowrie	90	3,100
Sandrac	10	340
Shellac	1,689	18,487
Senegal	334	14,319
Tragacanth	175	14,382
All other	63	4,631
Glue	172	13,874
Indigo	100	12,227
Carmine	5	460
Isinglass	5	1,090
Locust beans	311	971
Manganese	20	219
Magnesia	20	146
Manure salt	....	70,027
Mica	29	1,031
Nutgalls	5	171
Orchilla liq	12	515
Oxide zinc	147	2,833
Oil, aniline	36	4,262
Almond	34	1,194
Anise	2	100
Cod	790	11,985
Cocoanut	200	11,925
Fusel	17	907
Geranium	4	479
Haarlem	50	675
Juniper	1	67
Linseed	6	173
Lavender	17	1,125
Lemon	5	1,364
Orange	1	137
Olive	1,037	9,402
Poppy	2	123
Rapeseed	410	9,690
Rose	3	1,976
Rosemary	11	1,081
Sandalwood	5	460
Other essences	22	3,542
All other	12	252
Opium	67	20,796
Paints (unspecified)	....	5,310
Berlin blue	4	245
Colcothar	70	653
Drop black	78	1,950
Iron oxide	110	2,125
Lithopone	150	1,779
Ocher	218	1,395
Rose pink	30	193
Sienna	40	350
Tuscan red	10	77
Venetian red	35	102
White lead	100	1,118
Pitch	64	162
Potash, chlor	380	2,424
Carb	148	5,768
Caustic	70	1,725
Prussiate	64	5,690
Potato starch	1	8
Plumbago	1,316	49,878
Quinine	225	38,083
Reg antimony	100	790
Root, licorice	355	1,282
Rhubarb	363	6,176
All other	166	2,687
Saltpeter	2,011	6,848
Sage leaves	215	1,800
Senna	174	2,986
Sizing	20	300
Soda ash	81	1,282
Carb	40	535
Caustic	215	885
Sponges	142	9,523
Stearine	95	1,139
Sulphur	....	3
Ore	....	26,660
Sumac, extract of	140	2,648
Turmeric	200	1,013
Ultramarine	15	709
Uranium oxide	2	957
Vanilline	2	650
Vanilla beans	12	4,815
Varnish	53	2,260
Venice turp	51	792
Wool grease	50	440
Other	....	57,901
Bristles	117	25,977
Rennets	5	2,070
Alcohol	11	148
Dutch metal	55	7,203
Metal leaf	4	527
Cassia	5	74
Cinnamon	100	1,164
Chillies	200	1,599
Cloves	200	1,190
Ginger	501	1,804
Mace	35	1,044
Mustard	2	7
Nutmegs	200	2,384
Pepper	120	3,556
Pimento	1,556	9,939
Corkwood	....	12,576
Fustic	....	167
Logwood	1,383	4,917
Cement, Portland	11,304	10,348
Other	4	89
Candles	....	477
Clay	....	1,659
Carbon	....	746
Corks	....	261
Powder, polishing	....	686
Seed, annatto	18	57
Anise	173	2,630
Cardamom	7	158
Castor	1,400	6,343
Celery	253	3,707
Clover	246	2,665
Coriander	352	1,083
Fennel	7	131
Fenugreek	50	162
Hemp	63	277
Mustard	726	5,311
Poppy	600	2,450
Rape	52	477
Other	....	2,225
Soap, castile	50	445
All other	118	9,280
Stock	50	876
Tapioca	772	2,426
Flour	492	3,665
Whalebone	....	878

GOODS ON THE WAY TO THE UNITED STATES.

Singapore.

TO NEW YORK.

Laghetto, 8,000 bls. gambier.

TO BOSTON.

Freeman, 3,000 bls. gambier.

From W. C. South America.

TO THE UNITED STATES.

Cumbal (ss), 37,175 bgs, nitrate soda.
Highland Forest, 11,000 bgs. nitrate soda.
Nellie Troop, 16,500 bgs. nitrate soda.
Nordkyn (ss), 25,000 bgs. nitrate soda.
Kentigern (ss), 25,000 bgs. nitrate soda.
Cuzco (ss), 45,000 bgs. nitrate soda.
Coya (ss), 25,000 bgs. nitrate soda.
Progress (ss), 20,000 bgs. nitrate soda.
Falls of Keltie (ss), 35,000 bgs. nitrate soda.
Thornhill (ss), 30,000 bgs. nitrate soda.
Westhall (ss), 25,600 bgs, nitrate soda.
Canova (ss), 45,000 bgs. nitrate soda.
Queen Louise (ss), 25,000 bgs. nitrate soda.
Glenelg (ss), 25,000 bgs. nitrate soda.
Bellagio (ss), 38,000 bgs, nitrate soda.
Powderham (ss), 30,000 bgs. nitrate soda.
Queen Margaret (ss), 25,000 bgs. nitrate soda.
Blaamanden (ss), 30,000 bgs. nitrate soda.
Cacique (ss), 25,000 bgs. nitrate soda.
Membland (ss), 30,000 bgs. nitrate soda.
Capac (ss), 25,000 bgs. nitrate soda.
Baron Innerdale (ss), 30,000 bgs. nitrate soda.
Cromarty (ss), 20,000 bgs. nitrate soda.

RECORD OF VESSELS.

Port and Name. From Singapore.	Sailed.
Laghetto	Sept. 13.
Freeman	Sept. 27.
W. C. S. America.	
Cumbal (ss)	Due November.
Highland Forest	Due November.
Nordkyn (ss)	Due November.
Kentigern (ss)	Due November.
Canova (ss)	Due November.
Bellagio (ss)	Due November.
Coya (ss)	Due December.
Cuzco (ss)	Due December.
Progress (ss)	Due December.
Thornhill (ss)	Due December.
Westhall (ss)	Due December.
Falls of Keltie (ss)	Due Jan., 1901.
Queen Louise (ss)	Due February.
Glenelg (ss)	Due February.
Powderham (ss)	Due February.
Cocique (ss)	Due February.
Queen Margaret (ss)	Due February.
Blaamanden (ss)	Due February.
Nellie Troop	Due March.
Membland (ss)	Due March.
Capac (ss)	Due March.
Baron Innerdale (ss)	Due March.
Cromarty (ss)	Due April.

MERCK & CO.

Beechwood Creasote.
Creolin—Pearson.
Terpinhydrate.
Codeine Alk. and Salts.

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CAUSTIC SODA

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ACKER PROCESS COMPANY

The Bleaching Powder is of the Highest Strength and Quality

The Caustic Soda is of Highest Test, 77%, and Pure

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MANUFACTURING CHEMISTS

High Grade *Sulphuric, Muriatic, Nitric, Acetic* *Acids*

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AQUA AMMONIA.

SPECIAL 98% AND MIXED ACID FOR EXPLOSIVES,

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SULPHATE OF ALUMINA

CRYSTAL ALUMS, C.T.S., FILTER ALUMS

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CARBONATE OF POTASH.
ALL TESTS.

CHLORATE OF POTASH.
CRYSTAL and POWDERED.

Established by JAMES LEE, in 1825
James Lee & Co.
COMMISSION MERCHANTS
72 & 74 Pine Street, New York
IMPORTERS OF
CAUSTIC SODA, SODA ASH, SAL SODA BLEACHING POWDER, OXIDE MANGANESE
CHLORIDE MANGANESE, CARBONATE OF POTASH, HYPOSULPHITE OF SODA,
PALM OIL, PALM KERNEL OIL, COCHIN OIL, CEYLON OIL.
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Sulphate of Alumina, Chloride of Alumina, Hydrate of Alumina, Acetate of Alumina, Glauber's Salt, Sulphate of Soda,
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Thorium and Cerium Salts for incandescent lighting.
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98% GRANULATED CAUSTIC SODA.
High Test Bleaching Powder and Chlorate of Potash
New England Agents for
BRUNNER MOND & CO. and SOLVAY PROCESS CO.
48% & 58% PURE ALKALI and 74% & 76% CAUSTIC SODA.

CHEMICAL MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on pages 40 and 41.

Saturday Evening, Nov. 10, 1900.

During the past few days there has been a decided improvement in chemicals all around, especially since election. Domestic alkali is firmer, as many of the makers are not inclined to sell for forward unless at higher prices. Stocks for prompt delivery are still scarce of both alkali and caustic. Bleaching powder in good request, both for prompt and forward. Prices for 1901 have not yet been made public, but it is understood they will be higher than for this year. Chlorate of potash is still unsettled on the spot owing to free offerings by second hands. Arsenic is quiet but firm. Blue vitriol in better request, with prices gradually working to a higher position. Brimstone unchanged. Nitrate of soda under free arrivals is a shade easier for spot. The other light chemicals are all steady and showing few changes, as detailed below.

Heavy Chemicals.

ALKALI.—There is a decided firmer tone to the market, especially for forward delivery. There are, however, a few second hand lots procurable for November delivery of domestic high test at 75@80c. f. o. b. works, though the day before election several car lots were sold at 70@75c. f. o. b. works. Makers being well sold up for this year, are offering in a limited way at 80@85c. f. o. b. works, as to test and quantity. For delivery over next fire there is a good demand, and sales of several round lots are reported at 75@80c. f. o. b. works, as to quantity, and further business could be done but for the indifference of sellers.

BICARB SODA.—Rather more business is reported for home consumption before the close of water navigation. While the export demand has been rather slow, there are more signs of life, especially since election. Sales are reported of ordinary at 1½c. and of extra grades at 3¼@3½c. f. o. b., less the usual discount terms.

CAUSTIC SODA.—The market is firmer in all positions, with a good demand for prompt delivery of domestic high test at 1.80@1.85c. f. o. b. works, as to test and quantity. For delivery over 1901 there has been a good inquiry, and some business has been done, but sellers are very indiffrent about anticipating the future at current prices, which range from 1.75@1.80c. f. o. b. works, according to test, make and seller. Powdered is meeting with more demand for prompt and forward at 2¾@3¼c., according to test, make and seller.

SAL SODA.—As yet domestic makers have made no change in their quotations, as the demand is sufficient to clean up surplus stocks. Considerable business is reported for shipment before the close of canal at 60c. at works and in this section at 70c. f. o. b., less the usual discount terms. There is the usual jobbing demand for concentrated at 1.45@1.75c. f. o. b., usual terms for "Arm and Hammer." Very little demand for foreign, which held at 67½c. for shipment.

MONOHYDRATE CRYSTALS.—There is no falling off in the demand for prompt delivery or before the canal closes. Prices remain steady at 1.45@1.75c., and for "Snowflake" at 1⅛c. f. o. b. works, less the usual discount terms.

BLEACHING POWDER.—It was expected that prices for 1900 would be given out, but so far no intimation is given as to when they will be given. There is more demand for spot goods, and sales have been made at 1¾@1⅞c., according to brand and test. Continental makes are offered for 1901 at about 1⅞c.

Acids.

ACETIC.—There is more inquiry for forward delivery, and a good business is reported at 1¾c. and upward, as to delivery point.

MURIATIC.—Contract deliveries continue to show a satisfactory increase over the previous month. As yet nothing definite is given out regarding prices for next year. For the present we quote 1.20c. and upward, as to strength and delivery point.

OXALIC.—The spot demand is rather quiet, with retail sales at 5¾@6c., as to make and seller. It is reported that considerable business has been done for 1901 at 5⅝@5¾c., as to make and seller.

TARTARIC.—The bulk of the business at the moment is deliveries upon existing contracts. Very little new business is reported, and prices may be quoted fairly steady at 30½@31c. for crystals, and 31@31½c. for powdered, less the usual discount terms.

SULPHURIC.—There is very little to be said, as the trade is waiting the announcement of prices for next year. Meanwhile contract deliveries are going forward satisfactorily, thus preventing any accumulations of stocks in makers' hands. We continue our previous quotations of 1.20c. and upward, as to quantity and delivery point.

Miscellaneous Chemicals.

ACETATE OF LIME.—Makers are well sold up for November and December, but are meeting the wants of the trade in a limited way, both for export and for home consumption. Orders for several round lots have been turned down for November delivery. Prices remain steady at 1.05@1.10c. for brown and 1.55@1.60c. for gray, as to quantity and point of delivery.

ALUM.—Contract deliveries since the month opened are very satisfactory. There has been considerable business done for 1901, presumably at current prices of 1.75@1.80c. for lump, and 1.85@

"A·C·P" York Almost Chemically Pure.
CAUSTIC SODA GRANULATED {COARSE. FINE. POWDERED.
IN ALL COMMERCIAL TESTS.
York Chemical Company, 89 Sedgwick Street, Brooklyn, N. Y.

Bichromate of Potash.
Bichromate of Soda
and Chromic Acid
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AND
WATERBURY, CONN.

If you desire Chemicals of any kind please write to us for prices or information.

1.90c. for ground, as to quantity and delivery point.

ARSENIC.—Trade continues very quiet, as consumers of round lots are not inclined to anticipate their future wants. Prices remain nominal at 4½c. and upward, as to make and seller. Red is steady at 7@7¾c., as to seller.

BLUE VITRIOL.—More demand all around is reported both for export and for home consumption. Prices are firmer at 6¼@5½c., as to make, with only limited offerings thereat.

BRIMSTONE.—Only small lots on the spot are available for prompt delivery, consequently buyers are taking such lots as may be offered from steamers due at $22. Shipments for December are quoted at $20.75@21 per ton, with thirds about $2 less.

CHLORATE OF POTASH.—Under pressure to sell lots on dock by second hands who have been unable to obtain cheap storage prices have been more or less irregular. Domestic is generally quoted at 8¾@9c., with 1901 contracts offered for a limited quantity at 8½c.

CHLORATE OF SODA.—The usual consuming demand prevails for spot and forward at 9¼@9½c., as to make and seller.

CAUSTIC POTASH.—Under pressure to sell by second hands who have surplus stocks on the spot prices are irregular at 5¾@6¾c., as to test, quantity and seller.

CARBONATE OF POTASH.—No change except that buyers are still disinclined to buy spot lots, consequently prices are easy. For next year foreign makers are holding for much higher figures and are offering only in a limited way. We quote spot at 4@6½c. for calcined and 4¼@4½c. for hydrated, as to make, test and seller.

COPPERAS.—As usual at this season of the year the demand slacks off. Prices, however, remain steady at 72½c. for car lots, less the usual discount terms.

CREAM OF TARTAR.—The usual jobbing demand prevails for powdered at 22¼@22½c., less the usual discount terms.

GLAUBER'S SALTS.—Since election there has been a decided improvement in the demand for car lots, with sales reported at 70@80c., as to place of delivery.

NITRATE OF SODA.—Under free arrivals and more pressure to sell the market for spot goods may be quoted at 1.80@1.82½c., as to quantity and seller. Shipments are quoted at same figures.

SAL AMMONIAC.—The market remains quiet but steady, with only a limited jobbing demand for white or rough grain at 6c. and lump at 9⅛@9¼c.

SUGAR OF LEAD.—No change in the situation. Contract deliveries are satisfactory since the month opened and prices may be quoted at 5¾@6c. for brown and 7¾@8c. for white crystals, less the usual discount terms.

SALTPETER.—In the absence of any important demand, the market for crude is dull at 3.55c. and for refined at 4¼@5¼c., as to grade and quantity.

Ammoniates, Potashes, Etc.

The past week has been one of unusual dullness, as buyers won't take hold unless concessions are made; this, however, packers decline to do, at least for the present, or until they have accumulated stocks in excess of their deliveries for the balance of this year. Sulphate of ammonia is firmer, but early in the week a large business was done for November and December shipments at $2.72½@2.75, closing with $2.77½@2.80, asked for further lots. Blood is dull at $2.15 f. o. b. Chicago, with limited offerings. New York soft recently sold at $2.25 here but are now asking a shade higher figures. Tankage is easier at $1.85 and 10 f. o. b. Chicago for 9 and 20. Calcutta bone meal is dull at $23.00 for regular, and $20.00 per ton for off grades. Domestic steamed ground bone is weak at $17.50@18.00 per ton, as to purity. Fish scrap not offering at the moment.

If you are contemplating the purchase of machinery of any kind, and desire to be brought in contact with the different manufacturers, the Oil, Paint and Drug Reporter will be glad to supply full information upon receipt of request.

Goods in Bonded Warehouses.

The appended figures show the quantities or values of merchandise remaining in bonded warehouses Sept. 30, 1899 and 1900:—

	1899.	1900.
Asphaltum, tons	142	141
Argols, lbs.	162,950	40,388
Bristles, lbs.	91,057	154,540
Brushes	$17,159	$20,023
Cements, lbs.	1,412,784	11,398,572
Chloride of lime, lbs.	185,600	.....
Clays, tons.	240	301
Coal tar, colors and dye	$107,539	$141,937
Cocoa, lbs.	3,780	4,326
Cork, mfrs. of	$40,929	$39,630
Dyewood extracts, lbs.	297,838	211,561
Glass bottles, vials, etc.	$41,291	$55,461
Glass, C., C. & W. unpolished, lbs.	2,237,494	3,657,975
Glass, C. & S. polished; unsilvered, sq. ft.	47,859	18,898
Glass, C. & S. polished; silvered.	8,137	17
Glass, plate, rough, sq. ft.	.....	.....
Glass, plate, cast polished, unsilvered, sq. ft.	14,239	48,392
Glass, plate, polished, silvered, sq. ft.	60	.....
Glue, lbs.	19,282	144,117
Glycerine, lbs.	153,877	.....
Grease.	$7,142	$9,274
Gum, chicle, lbs.	1,160,449	560,848
Hops, lbs.	2,031	480
Lead, pigs, etc., lbs.	44,185	11,864
Lead in ore, lbs.	22,345,144	36,680,712
Linseed, bush.	.....	.....
Mineral water, gls.	119,131	101,786
Oil, whale and fish, gls.	23,356	57,786
Oil, mineral, gls.	150	.....
Oil, olive, gls.	21,565	33,170
Oil, other fixed	$29,927	$25,718
Oil, essential.	$7,285	$8,674
Opium, crude, lbs.	140,784	159,101
Opium, prepared, lbs.	9,962	14,473
Paints and colors	$15,376	$26,111
Perfumery, etc.	$21,470	$19,193
Potash, chlorate of, lbs.	2,128	13,873
Soda ash, lbs.	.....	45,308
Soda, caustic, lbs.	857,394	742,470
Soap, fancy, perf'd, lbs.	3,158	1,082
Soap, all others	$1,710	$4,284
Spices, lbs.	55,524	230,163
Spirits, proof, gls.	617,753	587,802
Sponges	$28,179	$49,746
Sumac, ground, lbs.	458,574	408,905
Zinc, pigs and old, lbs.	6,668	19,777

Synthetic Otto of Rose.

Simultaneously with the appearance on the market of a synthetic otto of rose, which claims to be the result of much scientific research, appears a paper on "German Rose Oil" by Walbaum and Stephan in the current issue of the Berichte (xxxiii., 2302 et seq.). It is not difficult to infer that these events are closely connected as cause and effect. The paper is of exceptional interest, and increases our knowledge of otto of rose very considerably. For the researches recorded, which were carried out in the laboratories of Messrs. Schimmel & Co., no less than 380 oz. of otto was employed. By a series of fractionations by steam distillation, and under reduced pressure, the otto was divided into two main portions, of which one boiled between 50 deg. and 100 deg. C. (pressure 13mm.), and the other at over 100 deg. C. The former fraction, amounting to about 300 c.c., possessed a powerful perfume, and easily combined with sodium bisulphite, thus indicating its aldehydic nature. The crystals formed were washed with ether-alcohol to remove non-aldehydes, then decomposed with alkali and steam distilled. The chief portion of the dis-

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tillate boiled at 80 deg. to 82 deg. C. (pressure 13 mm.), and had a strong odor of octyl-aldehyde. The naphthocinchoninic acid prepared by Doebner's method melted at 234 deg. C., which is identical with that of the known octyl-aldehyde compound. The oil, however, boiled at a temperature 20 deg. C. higher than octyl-aldehyde, hence the similarity in properties failed to establish identity. A combustion of the substance led to the formula C9H18O, and on oxidation pelargonic acid was obtained, which yielded a zinc salt melting at 132 deg. C. These facts were sufficient to identify the compound as nonyl-aldehyde. The residue of this fraction, freed from aldehydes, was carefully fractionated, and yielded the following results:—

		Sp. Gr.	Rotation.
(1)	67°— 87° C. at 14 mm.= 10 c.c.	0.858	—5° 20′
(2)	87°— 93° C. at 14 mm.=130 c.c.	0.873	—4° 30′
(3)	93°—100° C. at 14 mm.= 16 c.c.	0.877	—1° 30′
(4)	100°—110° C. at 14 mm.= 8 c.c.	0.897	+0°
	Residue .....5 c.c.	—	—

Fraction 1 consisted mainly of a terpene which was not further examined. Fraction 2 had a strong odor of linalol. A complete examination of this fraction, including a study of its oxidation-products, conclusively proved that its main constituent was linalol. From that portion of the otto of rose which boiled above 100 deg. C. at 14 mm., a small portion was extracted which combined with sodium bisulphate; this yielded, with B-naphthylamine and pyruvic acid, the characteristic citryl-B-naphthol-cinchoninic acid in yellow needles melting at 195 deg.—197 deg. C. on the first crystallization. From the citral-free fraction, phenyl-ethyl-alcohol was extracted with 30 per cent. alcohol, and identified by its phenylemethane as completely identical with the synthetically prepared body. This methane melts at 80 deg. C. About 150 grammes of the fraction (sp. gr. 0.881; boiling-point at 10 mm., 111 deg. C.) was heated on a water-bath for two hours with twice its volume of concentrated formic acid. Citronellol is, under these circumstances, transformed into a formate, whilst other terpene alcohols of this series are transformed by dehydration into terpenes. The oil, after the reaction, was saponified and fractionated, and citronellol definitely identified in one of the principal fractions, by conversion into citronellylphthalate of silver. German otto of rose is thus shown to contain the following compounds:—(Normal) nonyl-aldehyde, geraniol, citral, linalol, phenyl-ethyl alcohol, and aevo-citronellol. The synthesis is accordingly easy of accomplishment. One point, however, remains to be proved—viz., the identity of that otto with the kind distilled from rose-petals grown in the Balkans. Perfumery experts maintain that ottos differ. Of course the difference is not one to elude chemical-research methods, and we hope that the present investigators will turn their attention to the Balkan otto with equally good results.—Chemist and Druggist.

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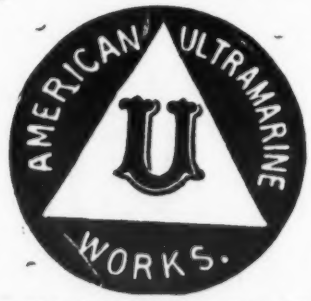
TRADE 

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DYE MARKET.

NOTE.—Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on page 41.

Saturday Evening, Nov. 10, 1900.

As might have been expected this week, there was no material activity in evidence, though, all things considered, there was no marked dullness shown; in fact, jobbing trade in most lines was pronounced fairly good, and confidence was freely expressed that a change very much for the better would quickly follow, now that all uncertainty as to the result of the election had been removed. The general tendency of prices has been firm and upward, due to the strong position of raw materials. An exception must be made of tin solutions, which, following the easier position of pig tin, have been reduced one cent from the basis of former quotations. We note no other radical changes, though gambier has become stiffer in all positions and a few other lines show particular strength.

ALBUMEN.—Manufacturers of egg albumen abroad complain of the ruling prices, in view of the general poverty of the crop, and claim that present quotations allow them no margin. Demand here continues steady, but without improvement, and values remain upon the same level of 57@65c., as to quality. Blood albumen is in fair request and firm at previous quotations of 16½@19c.

ANILINE OIL.—The market is without material change, and demand continues at least moderate at the lately advanced prices, which are firm as previously quoted at 10@10½c.

ANILINE SALT.—Prime white salt has been in good request in a jobbing way on spot and also for futures. Contracts extending over next year for at least 200 tons were made during the week at prices ranging from 9c. to 9¼c. Manufacturers' prices are somewhat higher, and present figures have been set by dealers anxious to sell to realize profits.

BICHLORIDE OF TIN.—While there have been no new heavy contracts made of late, a good jobbing trade continues, and deliveries upon old orders are freely taken. Following an easier position of pig tin prices for bichloride have come down 1 cent. We now quote 50 degs. at 9½@11c. and 60 degs. at 11⅞@13c.

BICHROMATES.—There was comparatively little inquiry during the week, though in a jobbing way at least a moderate trade was done. No new contracts were made, but prices both for potash and soda are firm at 8½@8¾c. for the former, and 6¾c. for the latter. Scotch bichromate of potash is offered in a small way at 8¾@9c.

CUTCH.—The interest taken in cutch was trifling, and has been so for some time. The market seems to sag, though stocks are not heavy and we hear of no material concessions having been made. We may again quote upon the basis of 5½@6c. for mat cutch, with other grades in proportion.

DEXTRINE.—Conditions are as previously reported. Demand has been no better than moderate, as buyers and sellers are apart upon present prices. Jobbing trade, however, would indicate that stocks in consumers' hands are not heavy. The market maintained a firm tone in sympathy with all starch products, and no concessions can be had from present prices, which are unchanged from those of the previous week, and which we repeat as follows: Domestic, 5½@6c.; imported, 5¾@6c., and corn dextrine, 2¼@3c.

DIVI DIVI.—The small lots that have recently come in have been sent to store, and the market is one of all round quietness. The heaviest holders are maintaining prices, but concessions can be had of outsiders with small lots to be disposed of. We quote the general market as being between $47 and $50 per ton.

FUSTIC.—The week was particularly quiet, and no new feature was developed. Prices rule rather firm notwithstanding and without change from range of $16 to $22.

GAMBIER.—The market is gradually becoming firmer for gambier in all positions, due to the comparatively small visible supply and the firm tone of the primary market. It is thought that the avilable supply is short, as otherwise the present good prices would bring forth freer offerings. As it is, holders at Singapore do not appear to be in the least anxious sellers. They make no offerings, and all bids for round lots at a shade under market quotations have been consistently turned down. Consuming demand, however, has been light in view of the high values set by present holders. Contracts have been pretty well cleared up, too, leaving fair supplies in consumers' hands, and there are no new contracts ahead. The steamer Manitou is now in port with 501 bales, all of which has been sold and will go immediately into the channels of consumption. The only sailing vessels afloat are the Leghetto, with 8,000 bales for New York, and the Freeman, with 3,000 bales for Boston. The Strathisla, according to latest reports, had not yet left port. She will bring only about 500 tons. The Rose Innes will follow her, but as yet she has not been reported at Singapore. October deliveries aggregated 13,131 bales. Store gambier is now held firm at from 4¼@4½c. Steamer gambier nearby is held at 4.15c., at which figure a small lot of 25 tons is offered. Steamer due December is quoted 4.05c., and later arrivals at 3.95c. December-February is held at 4.10c. Leghetto due January is quoted at 4¼c., but the bulk of her cargo is not on the market.

HYPOSULPHATE OF SODA.—There is nothing new to report and the position of the market is unchanged. Demand has inclined to quietness for some time and quotations are reported as follows: American casks, $1.80@2; kegs, $1.90@2.12½; German casks, $2@2.20, and kegs, $2.20@2.50.

INDIGO.—Since the London quarterly sales, reported in our last issue, the market has been rather barren of feature. Inquiries coming in isdicate awakened interest, however, and the Calcutta auction is looked forward to with considerable interest. From all reports the crop of vegetable indigo is considerably above that of last year, but as the quantity carried over in stock was much less, the requirements of the large consuming industries are expected to exceed in 1900-1901 the quantities purchased for 1899-1901. Meanwhile it is a waiting market here with a general impression that the sale will bring about higher values.

NUTGALLS.—So far as spot galls are concerned nothing can be said. Stocks of blue Aleppo are growing scarcer and are being held at old current quotations of 26@27c. New crop Aleppo for delivery after the first of the year, however, is easy and freely offered at 15 cents, at which figure business has been done. Smyrna galls ex store are again quoted at 16 cents, but are in light request. China galls on spot are still scarce and firm at 20 cents. Futures, however, are somewhat easier, and can probably be had for 17 cents.

PICRIC ACID.—Offerings are very light owing to the bareness of the market, and prices are more or less nominal at current quotations of 34@37c.

PRUSSIATES.—Considerable business was done in futures at the extremely low prices offering a week or ten days ago, but now the market has steadied itself and future shipments are quoted firm at 16 cents, with little business doing. There is still considerable stock on hand, to move which manufacturers are making concessions. The general asking price for prompt delivery is 15c. Prussiate of soda remains quiet and steady at old current figures of 13@14c.

STARCH.—Conditions are as previously reported. Business for the season is generally fair, though the past week was naturally a quiet one. Prices all round are firmly held. Particularly is this true of potato starch, which is

likely to be in rather short supply next year, owing to the small quantity of domestic crop available for manufacturing purposes. Foreign potato starch is practically in the same strong position, owing to the failure of potatoes in the British Isles, which will draw heavily upon Continental supplies. Corn is firm in sympathy. We quote as follows: Corn, pearl, in bbls. 1.55@2c.; in bags, $1.45@1.50; potato, 3⅝@3⅞c.; rice, 7½@9c, and wheat, 4½@5½c.

SUMAC.—Spot sumac is very difficult to obtain, as the supply, even in second hands, has been well cleaned up, leaving offerings confined mostly to overstocked consumers. There is a moderate demand for shipment at current quotations, which are given at $52 for Sicily No. 1. The spot price is nominally $55@56.

TANNIC ACID.—Interest has centered in a recent decision of the Treasury Department increasing the duty on aqueous extract of nutgalls, which has been used for the same purpose as tannic acid. The market for the latter is, consequently, firmer, though there is no change in price to report from previous quotation of 46@50c. for commercial.

TAPIOCA AND SAGO FLOUR.—The week developed nothing new. Tapioca flour, while in light request here, is firm, in sympathy with conditions abroad. Sago flour remains easy, and both are without quotable change, as follows: Tapioca, 3¾@4c. and Sago 3⅛@3.30c.

TIN CRYSTALS.—While the week has been comparatively quiet, the market has been active for the season, and remains firm upon the basis of former quotations, as follows: Barrels, 24½c.; kegs, 25c., and jars, 26c.

ZINC DUST.—Comparatively little interest has lately been shown, and the market remains quiet at 7⅝@8c., as previously quoted.

If you are contemplating the purchase of machinery of any kind, and desire to be brought in contact with the different manufacturers, the Oil, Paint and Drug Reporter will be glad to supply full information upon receipt of request.

Patents Granted.

660,548.—APPARATUS FOR MAKING ROSIN-SOAP. Fritz Ariedter, Berlin, Germany. Filed July 22, 1899. Issued Oct. 30, 1900.

660,697.—GLASS-WORKING MACHINE. John J. Burkhardt, Tiffin, Ohio. Filed May 19, 1900. Issued Oct. 30, 1900.

660,718.—OIL - CAKE - FORMING APPARATUS. Edgar C. Bisbee, St. Paul, Minn. Filed Feb. 17, 1899. Issued Oct. 30, 1900.

660,557.—PROCESS OF EXTRACTING OIL. Emile Maertens, Providence, R. I. Filed April 2, 1900. Issued Oct. 30, 1900.

660,758.—APPARATUS FOR EXTRACTING OIL. Emil Maertens, Providence, R. I. Filed April 2, 1900. Issued Oct. 30, 1900.

660,770.—BLUE SULPUR DYE. Herman Gussmann, Hochst-on-the-Main, Germany. Filed May 12, 1900. Issued Oct. 30, 1900.

660,814.—SOAP CUTTER AND SEPARATOR. John J. Gaynor, Indianapolis, Ind. Filed May 3, 1900. Issued Oct. 30, 1900.

660,859.—PROCESS OF MAKING SOLUBLE COMPOUNDS OF QUININ AND CAFFEIN. Aisik Kreidmann, Altona, Germany. Filed May 21, 1900. Issued Oct. 30, 1900.

660,973.—APPARATUS FOR MAKING LAMP-BLACK. John F. Sanders, Chicago, Ill. Filed Nov. 11, 1899. Issued Oct. 30, 1900.

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ACETIC ACID,	BISULPHATE OF SODA,	CHLORIDE OF ALUMINA,
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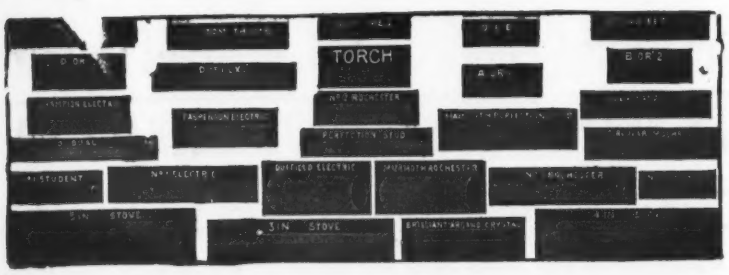

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